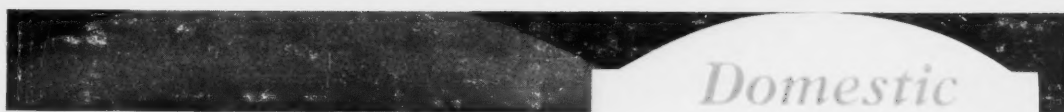


SOAP

with which is included an

Insecticide & Disinfectant Section

Published by MACNAIR-DORLAND COMPANY, INC., 136 Liberty Street, New York



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DIPHENYL METHANE

Characteristic of the Geranium Leaf
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61
83

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The new Falcon Price List of sanitation products—the most complete list in the industry—is now ready, and is yours for the asking.

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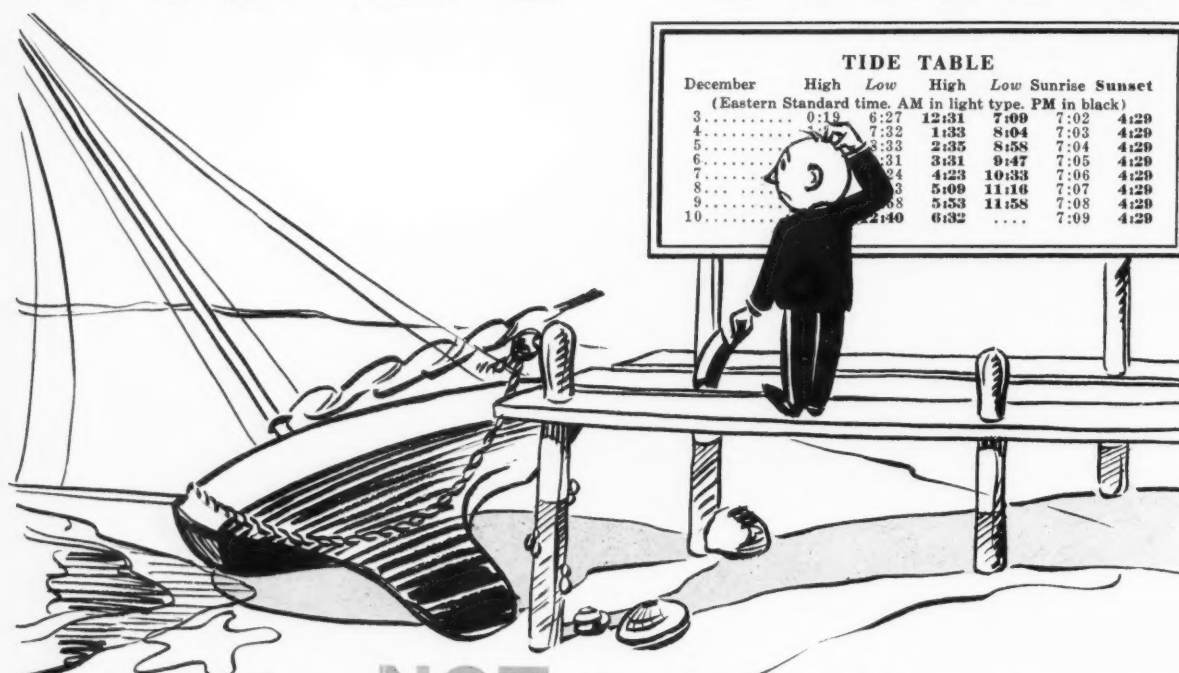


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SOAP

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with which are included

Insecticide & Disinfectant Section

Production Section

Volume IX

January, 1933

Number 1

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«

DR. FOSTER D. SNELL
Consulting Technical Editor

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Published monthly on the 15th by

MACNAIR-DORLAND COMPANY, INC.

Ira P. MacNair

Grant A. Dorland

136 LIBERTY STREET

PUBLISHERS

NEW YORK, N. Y.

Subscription rate \$3.00 per year. Canadian, \$5.00. Copy closing dates—7th of month of issue for reading matter and 25th of month preceding month of issue for display advertising. Entered as second-class matter, April 11, 1931, at Post Office, New York, N. Y., under act of March 3, 1879. Circulation, December, 1932, issue 2,903 copies. Total distribution 3,200.

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Say you saw it in SOAP!

*It's all
in the CAP*

The Soap and Sanitary Products Industry

The soap and sanitary products industry, comprising some 2,100 manufacturers, doing an annual business of over \$400,000,000, is made up

An Industry of Interrelated Groups

of four closely related groups. They are closely allied, not only because their products all have to do with some phase of sanitation but also because the same company may frequently be classified in more than one group. These groups are (1) manufacturers of soaps; (2) manufacturers of insecticides, disinfectants and other sanitary products; (3) sanitary supply houses; (4) fumigators and exterminators. Their close connection demands that they be served by one publication. A publication specializing in each subject would mean useless duplication, not only in circulation but also in advertising and editorial appeal.

This group is composed of companies classified primarily as soap manufacturers. In the sanitary products industry most of the larger units

The Soap Industry

make soft soap products. They are not classified as soap manufacturers, but this serves as one of the connecting links between the two groups. The principal products of the soap industry are hard soaps—toilet soap, laundry soap, soap powder, flakes, chips, etc. In the past few years many of these organizations have added a line of sanitary products—another link between the two groups.

The sanitary products group makes household insecticides, disinfectants, cleaners, polishes, moth preventives, deodorants and allied sanitary

The Sanitary Products Industry

specialties. The connection with the soap industry has been explained above. In many cases these companies do not make a complete line. What they do not manufacture they buy in bulk in the trade. They are frequently both manufacturers and jobbers. This connects them very definitely with the Sanitary Supply House group.

Sanitary, or Janitor, Supply Houses sell in bulk to buildings, institutions, clubs and other large users of soaps and sanitary specialties. In some

Sanitary Supply Houses

cases they act exclusively as jobbers. In others they augment their jobbing line by manufacturing a few items for which they have a larger than ordinary demand. This very general duplication of interest connects them very closely with the sanitary products group. Another field in which their operations have been materially extended of late is in exterminating and fumigating. Many sanitary supply houses operate complete fumigating and exterminating departments.

Some fumigators and exterminators are exclusively in this line of business. Others make some of their own materials and sell them to

Exterminating and Fumigating

users of their service. Others manufacture nothing but sell considerably on a jobbing basis. This ties them in with not only the supply houses but the sanitary products industry as well.

The soap and sanitary products industry represents a tremendous market for an almost infinite variety of materials, containers, equipment, etc.

A Tremendous Market

It takes a huge amount of money to produce products valued at \$400,000,000 annually. Besides buying large quantities of chemicals, perfuming materials, oils, fats, petroleum bases, various raw material specialties, etc., the industry uses all kinds of containers—bottles, boxes, tubes, cans, drums, pails, etc.—and almost every kind of packaging or process machine. In addition, the industry handles all kinds of sanitary accessories on a jobbing basis—floor machines, mopping tanks, dispensing equipment, brushes, mops, waste receptacles, etc. Every manufacturer with a product that has possibilities in this field should find out more about it. Complete information may be secured from the publishers of

"SOAP" ...the industry's business paper

●

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NOPCO laboratories now offer you the improved furniture polish which brightens and cleans. It adds a rich, lustrous film and leaves no trace of oiliness or greasiness. Because of economy and ease of application, this quality product is a popular seller. Ask for NOPCO 1716-AL-2.

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Resinoids

Tombarel Freres produce a complete line of resinoids, all very interesting bodies for soap perfume. Resinoids not only give character to soap odors, but also act as fixatives.

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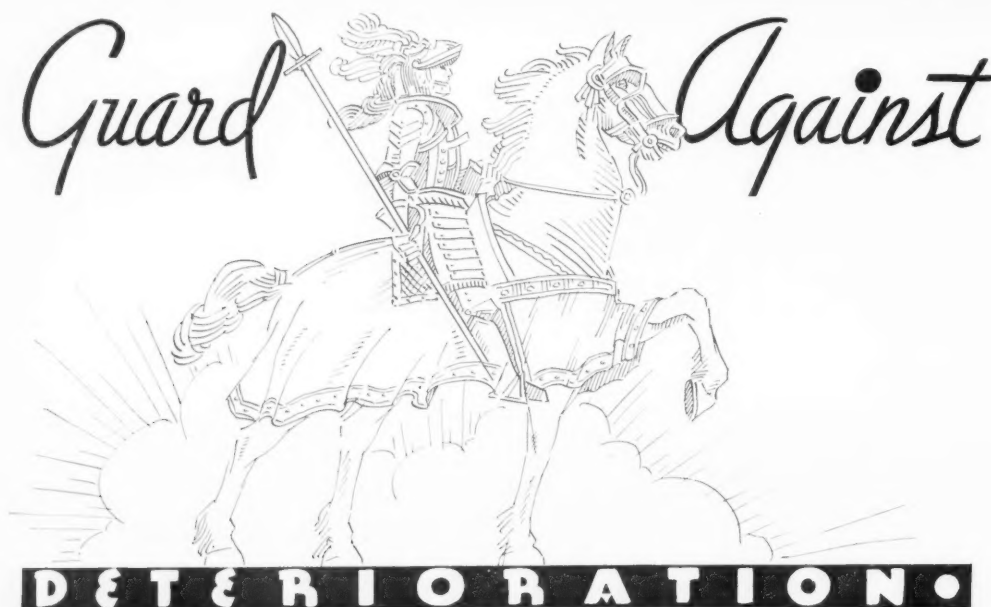
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Our special soap perfumes are not permitted out of our plant unless they have been proven in our miniature soap factory set up as a testing laboratory. They must retain their vitality and potency even after a long period on the shelves. Deterioration and discoloration are reduced to a minimum.

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Miltitz (near Leipzig) Germany

Say you saw it in SOAP!



● YOUNG MAN, OUR FOUNDER HIMSELF SELECTED THIS PACKAGE

Evidently Mr. Gallump is strong for tradition. Which is all right, too—in moderation.

The thing that's wrong with this picture is Mr. Gallump's state of mind. He's got a stand-pat complex. He forgets that when Granduncle Abner founded the business he probably picked the best there was in the way of packages *at the time*. Tradition did not hold Abner back...there wasn't any.

But packages have progressed a lot, Mr. Gallump, since Abner's day...containers, closures, and designs. So don't turn that young man away. Maybe he is about to suggest an improvement for your package that will actually stimulate sales.

Package improvement does not necessarily mean a radical change or an entirely new design. It may be highly desirable to retain the traditional character of the old...yet at the same time improving efficiency or convenience. Anchor will be glad to work with you in studying package effectiveness, in making a thorough-going package or closure appraisal. Then, after careful analysis and consideration and without any obligation, Anchor will submit a specific recommendation fitted to your individual needs.

●
ANCHOR CAP & CLOSURE CORPORATION
 Long Island City, N. Y. Toronto, Canada
 BRANCHES IN ALL PRINCIPAL CITIES

ANCHOR AMERSEALS



CONVENIENCE is the keystone of Anchor Amerseal popularity. It is easy to understand, too, why these closures are so convenient, so easy to remove and to replace, when one examines their unique features of design and the way they function. How these results are accomplished is described in detail on the opposite page.

The fact that Anchor Amerseals remove easily and reclose equally as readily—by a simple quarter-turn of the wrist—brings a number of important advantages in its train.

Obviously it is this virtue of convenience

that accounts for the unqualified and widespread approval of Anchor Amerseals by the consuming public. To the manufacturer this constitutes a sales advantage that can hardly be over-emphasized.

The reclosing feature makes them ideally adapted to a great variety of products—those that are not intended to be consumed at once, but which are used a portion at a time over a considerable period.

In case of removal there is no comparison between Anchor Amerseals and the ordinary thread type of cap. Products that

would gum, stick or congeal in the threads, those that are apt to cake or crystallize and cement such a cap solidly to the container have no effect on an Anchor Amerseal.

It is easy to break the few points of contact with a very little effort. Nor is there the chance for corrosion, freezing the cap to the container through having some of an acid product or brine trapped in the threads—because there are no threads.

They retain their unparalleled convenience even in the face of products that seem to offer unsurmountable obstacles.

WHY ANCHOR AMERSEALS

SEAL SO TIGHTLY

YET REMOVE SO EASILY

- The unique way in which Anchor Amerseal Caps make complete sealing contact around the full circumference of the top of the container accounts for their well known, dependable sealing efficiency. It also accounts for their adaptability to so many varied types of products — confections, cosmetics, food products, pharmaceuticals, proprietary medicines, polishes, and specialties of all kinds.

The principle that distinguishes Anchor Amerseals from all other types of caps is their scientifically designed double-notched lugs. These lugs engage the under side of corresponding threads of the glass container, drawing the cap down tightly and evenly onto the container.

The lugs are formed (not cut) from the rolled edge of the cap, thus eliminating sharp raw edges, and giving them unusual strength to withstand the strain placed upon them when the cap is tightened. The double-notched and slightly pitched construction of the lugs is exclusive with Anchor, and insures a positive, non-slipping grip on the glass threads. These features are the result of years of experimentation and represent the most efficient type of construction yet devised.

In application, as the cap is tightened and the lugs engage with the glass threads, they exert a uniform pressure around the full 360 degrees of the container finish, as shown in the diagram below (left). In addition, the operation of tightening puts the metal under ten-

sion, giving it a spring action seal that further assures a tight and constant working pressure.

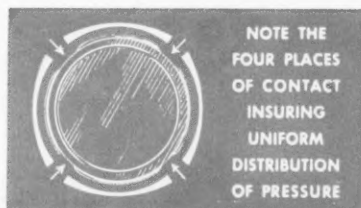
The cap may be started at any point on the container finish, no matching or adjusting of threads being necessary. The liner makes immediate contact with the sealing surface of the container, which with thread types of caps is not effected until the cap has been completely tightened. The application of the cap is simple and easy—only a quarter-turn being necessary to apply or to remove it.

Since contact with the glass threads is made at but two or four points, depending upon the size of the cap—and these on the under side of the glass threads—it is easy to appreciate why Anchor Amerseals are so easy to remove. As there are no threads, the caps will not gum, freeze or cement to the container due to either corrosion or congealing of the product—as is the tendency with thread types of caps.

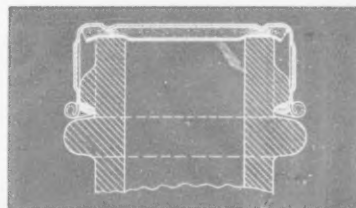
This feature in itself is sufficient to warrant their adoption—especially if the products you pack are sticky, tacky, viscous, or with corrosive properties.

TWO-PIECE STYLE

For those products which require a vacuum, the Anchor Amerseal Cap may be obtained in the two-piece construction. This cap possesses all the conveniences and reseal advantages of the regular Anchor Amerseal, but in addition permits of sterilization, vacuumizing, hot or cold packing.



● This diagram to the right shows an Anchor Amerseal Cap after it has been tightened. Note the firm contact of the cap lug with the glass thread, on its under side. Also note the pressure exerted on the resilient liner where it meets the container top and how it is compressed at that point, making a tight seal and compensating for any irregularities in the glass. The metal top and side walls, too, are under tension helping to hold the cap securely in place and keeping it tightly seated.



CLOSURES

TO MEET EVERY
SEALING NEED

The ideal closure for you is the one completely adapted to your particular product, to the diverse needs and conditions surrounding the production and sale of that product. In some cases sealing is the paramount consideration; with others it may be convenience, or sales appeal, or suitability to the package design, or adaptability to production routine. • Among Anchor's fifteen different types of closures there is undoubtedly one best suited to your individual requirements.

ANCHOR

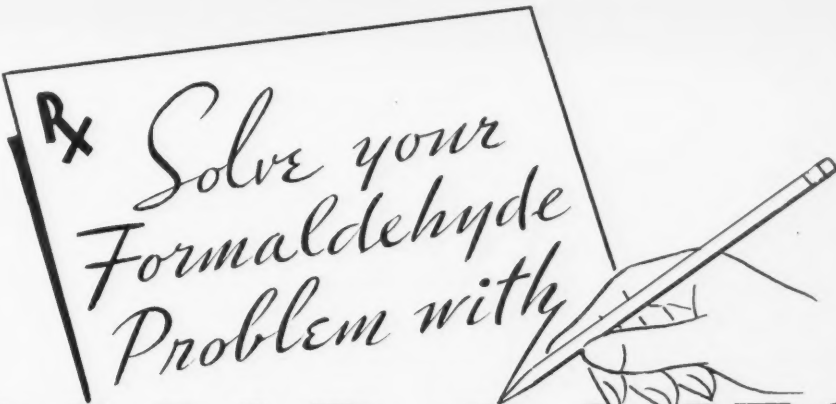
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LIQUID

WAX

Does Not Require Polishing

"BEAMAX" cuts floor maintenance costs by saving labor—no buffing is necessary on application, and no polishing is required.

"BEAMAX" is easily applied with a cotton mop or lamb's wool applicator. It smooths itself. It dries to a hard, lustrous finish in twenty minutes or less.

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"BEAMAX" is recommended for all types of floors—this one wax takes care of linoleum, wood, tile, terrazzo, rubber, asphalt tile, mastic, etc.

"BEAMAX" will not show lap marks when used for "patching" worn spots. It has no odor.

"BEAMAX" is sold in drums, half-drums, and quarter-drums, as well as in 10-gal., 5-gal., and 1-gal. cans. It is a perfect emulsion and will not settle out.

Try "BEAMAX" for yourself. Send coupon for sample and prices.

THE DAVIES-YOUNG SOAP COMPANY

Dayton, Ohio

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The Davies-Young Soap Co.
Dayton, Ohio

Please send me without charge sample can of "BEAMAX" Dries to a Lustre LIQUID WAX.

Name

Address

City

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LEADERSHIP

THRU THE PAGES OF CHEMICAL HISTORY

PARACELSUS

26



Paracelsus (1493-1541), the Luther of chemistry and medicine, broke with tradition and publicly burned the writings of predecessors who founded their practice on the teachings of the ancients. He brought medicine from a pseudo-science half magic, half tradition, to a real science based on observation and experiment.

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is pioneering new developments in diversified fields. Through the unceasing work of its chemists and extensive research laboratories, Monsanto is constantly enlarging the field of usefulness of its present products and bringing out new products to meet the changing needs of consuming industries.

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Do you want a *Partner?*

If your present sales and profits are entirely satisfactory to you, then this offer may not be of interest.

On the other hand, if you can stand more business NOW, here is a suggestion that actually works and has proven itself again and again.

Just add a few suitable long profit products to your line that you can sell to your present customers *without going to the bother and expense of investing in machinery, stocks of raw materials, labels, etc.*

We will take care of all that for you,—and supply you with high grade finished products at prices so low that it would scarcely pay you to make them up yourself.

In addition, we have attractive imprint labels ready for your name and address.

OUR HALF

Making up for you high grade finished products at minimum cost.

YOUR HALF

Selling a few extra profitable items to your present trade and watching your sales jump.

There are some concerns who are actually *making more money today than ever before*. Clifton Products can aid you, too.

CLIFTON CHEMICAL CO., INC.

CLIFTON BUILDING

246 Front Street

New York City

Makers of Quality Sanitary Products for the Trade Since 1912

TEAR OUT HERE

CLIFTON CHEMICAL CO., INC.

246 Front Street, New York City.

Your plan is worth looking into. The items checked would probably help increase our sales. Please quote:

- | | | |
|---|---|--|
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| <input type="checkbox"/> Liquid Soap Base | <input type="checkbox"/> Rub-No Wax | <input type="checkbox"/> Pine Tree Disinfectant |
| <input type="checkbox"/> Liquid Soap Dispensers | <input type="checkbox"/> Silver Polish Paste | <input type="checkbox"/> Shampoo Liquid and Base |
| <input type="checkbox"/> Metal Polish | <input type="checkbox"/> Liquid Floor Cleanser | <input type="checkbox"/> Shaving Cream |
| <input type="checkbox"/> Deodorizing Cakes and Blocks | <input type="checkbox"/> Oil Soap | |

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(ADDRESS)

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**THE FIRST, AND
STILL THE FIRST**

Niagara
CAUSTIC POTASH



Niagara Alkali Company was the first, in this country, to manufacture Caustic Potash. Our many years of development, experience and increasingly expert control have produced a grade of potash which is the finest obtainable here or abroad.

Caustic Potash is difficult to produce in a pure state. For a safe, consistently excellent quality, specify *Niagara*.

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**Our
PRESIDENT** **and** **England's
KING**

see "eye to eye" on many matters of high import.

As one example, both use the product of JONES SOAP PRESSES for the very good reason that where their writs run, all the best soaps are pressed by these world standard machines.

The same custom might reasonably be imputed to all other great rulers because where fine soaps are made the globe 'round, JONES PRESSES are at work.

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CINCINNATI, OHIO
P. O. BOX 485

Also builders of the CONSTANT MOTION CARTONER,
the standard cartoning machine of the world.

Say you saw it in SOAP!

SOAP

Volume Nine

Number One

Red Ink Ahead?

ONE year ago, on this page, we hazarded a guess as to what 1932 held in store for the soap industry. We concluded that "... it would not be surprising to see some of the ills of general industry, which soap makers have escaped to a surprising degree during the past two years, injected into the soap business in 1932 as a result of a keener competitive situation." We wish that we had been wrong, but unfortunately, we were not. The fight for tonnage was waged with price cuts instead of with increased sales and advertising efforts. The results were inevitable.

Two years ago, every political and economic Pollyanna in the country was ready and willing to restore prosperity with a prediction of optimistic twaddle. A year ago, forecasts were fewer and far more cautious, but withal rosy hued. This year, we have failed to read a genuinely optimistic prediction for 1933. Maybe it is a good sign. Maybe all these Pollyannas have lost their jobs, and those who work for a living can begin to dig us out of this thing, unhampered by any false ideas of what is "just around the corner."

The soap industry unquestionably can have no false ideas of where it stands as the new year gets under way. Although the average soap plant may be making a profit today, there is no doubt but that the stage has been

set for a plentiful use of red ink by the industry before the year is out. Competition has resolved itself almost altogether into a matter of price. For the first time in recent years, a lowering of quality standards is beginning to be more pronounced and more common. The general tone of selling methods has been lowered, the scramble and grab type of sales work becoming more apparent. A step from the plane on which the soap business finds itself right at this moment, into a rather well demoralized state, does not seem particularly far to one with a general view of the industry.

All this may appear to be just another eruption of that same pessimism which seems to have the world in its clutches. It is not that. It is an honest attempt to point out that the road along which the soap industry is headed at present *can* and *may* lead into a state of demoralization where so many industries find themselves today.

We are inclined to feel that irrespective of what conditions may develop, effective corrective influences must come from the outside rather than from within the industry. In the present state of affairs, nothing short of a sharp rise in raw material prices, we believe, could do much good. This would undoubtedly help to clear the clouded atmosphere and to stabilize the industry as a whole more than any other single thing. It is one form of outside influence which could be really effective.

More Price Reductions

PPRICE reductions on several nationally advertised brands of toilet soap greeted the opening of business for 1933. New schedules for jobbers revealed prices lower by ten to twenty per cent. A number of smaller soap makers and private brand houses were not long in following suit. In some quarters, this move on the part of the larger soap manufacturers is interpreted as the opening gun in a battle to win back in 1933 the business which leading national brands have lost to local and private brands over the past two years.

It is to be regretted that a sharpening of price competition should usher in the new year for the soap industry. There is little likelihood that lower prices will sell a pound more soap in 1933. Each cut is followed by competitive reductions to correspond to the new price levels. Within a week, each soap maker is again in the same position in relation to his competitors. The only difference is a generally lower level of prices throughout the industry.

The contention of the larger soap makers that they cannot sit by and see their tonnage on advertised brands stolen away by smaller soapers with lower prices, is logical. At the same time, what assurance is there that present and even future lower prices might not be cut by smaller manufacturers and private brand houses? Is it the intention of some manufacturers of national brands to keep going down to a point below which competing soap makers cannot go? If so, we beg leave to remind the industry as a whole that a price war has never yet really solved a sales problem.

The Whale Oil Purchase

THE purchase of practically the entire whale oil production for 1932-33 by the Unilever interests changes somewhat the general aspects of the world oil and fat situation. The catch, limited by agreement under a quota system, is estimated at approximately 350,000 tons. The price is stated to be thirteen pounds, which at the present rate of exchange is equivalent to two cents per pound. Although a 350,000 ton catch is far below the

tremendous production in 1930-31, it is no mean quantity of oil. The purchase by Unilever and associates will mean that this much less vegetable and animal fats will be consumed this year. Had the oil not been purchased in advance of completion of the whaling season, there is doubt that anything like this quantity would be produced. At the same time, any appreciable tonnage not sold in advance and offered for general sale under present conditions might have had a further demoralizing effect on the general oil and fat markets. The Unilever purchase has undoubtedly been a blessing to a sick whaling industry. Whether it is also a blessing to other fat and oil producers is very much a two-sided question, problematical on both sides depending chiefly on one's point of view.

—o—

Who published the first comic strip advertisement? Articles and letters in recent issues of *Printers Ink* indicate that Colgate & Co. first adapted the comic strip in 1912 for advertising Cashmere Boquet Toilet Soap. If they were the originators, they started something! Comic strips have their place but when they try to be too serious they merely become ridiculous. *Printers Ink* comments on some of the first comic strips as really funny—obviously not to be taken literally—and then adds that “some of the modern strips are just as funny—but the men who built them didn't intend them to be.”

—o—

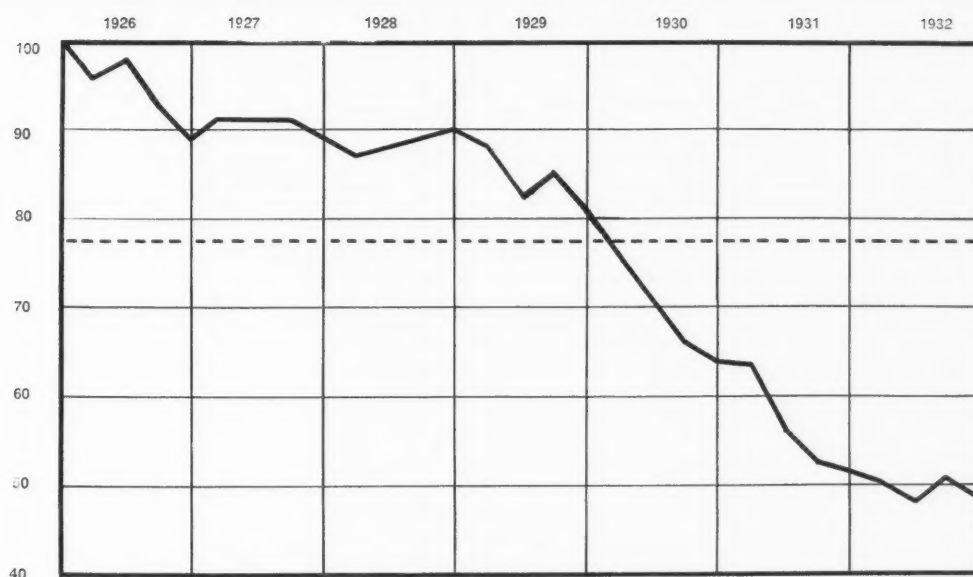
A certain few soap plants are reported to have been doing a land office business in 1932, and to have materially increased capacity. Upon inquiring how they do it, we have been requested in each case “to walk,—not run,—to the nearest exit.”

—o—

During 1933, we would rather be something else than a purchasing agent for a soap company. Who is there to say that the present raw material situation has not got a stick of dynamite in its back pocket?

—o—

For the retail buyer of toilet soaps, the nickel is becoming mightier than the dime.



Index of Soap Raw Material Prices—1925-1932

Dotted line shows seven year average. Note recovery in third quarter of 1932 and subsequent decline

The Raw Material Markets—

A Review and Outlook

THE steady decline in soap raw material prices which since January, 1926, has reduced soap makers' costs to less than half of what they were seven years ago, was interrupted in the third quarter of 1932 by a sharp upward movement in prices of soapmaking oils, fats and greases. The first step in the advance was a sharp increase in the price of lard, occurring in late June, which set the pace for sympathetic advances in quotations on other basic commodities and competing oils and fats. The rise was confined chiefly to domestic products, and at the time it seemed to have in it something of a political significance, due to the approaching presidential election. When the Maine election in September forecast the victory of the Democratic party at the polls in November, the forward movement in the security and commodity markets was checked, and from then until the year end, quotations on soapmaking oils, fats and greases resumed their downward trend.

At the present writing, prices have not yet retreated to their early summer lows, but the greater part of the advance has been lost. The net result, however, has been to halt the downward plunge, and soap raw material prices as of January 1, 1933, average only about

six per cent lower than January 1, 1932 figures. This compares with a drop of approximately twenty per cent in soap raw material costs over 1931. To chart followers, this decline in the rate of price reduction and the ability of prices to break through the falling trend line on the upward side seems to indicate that the bottom of the price curve has been reached and passed and that the next movement will be to a higher level.

In the composite chart shown above the movement of soap raw material prices over the past seven years has been recorded, with calculations based on price movements of a representative group of thirty oils, fats, chemicals, essential oils and perfuming materials, weighted according to their relative importance to the soap maker. As the soap maker's purchases consist largely of fats and oils, this group is given extra weight in making up the composite index. The price level for January, 1926, is taken as the base or 100 point, and the indices for the other months express the relation of prices then current to the January, 1926, level. On this basis of calculation it is apparent that prices have fallen more than fifty per cent over the seven year period and are now approximately thirty-eight per cent below the average for the past seven years.

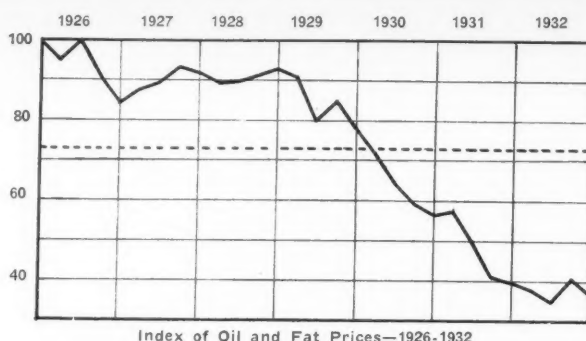
THE principal factor in this drastic reduction in soap raw material prices is found in the sharp drop which has occurred in the prices of soapmaking oils and fats over the past four years. As compared with the January, 1926, base point of 100, the present cost of oils and fats stands at 37, a reduction of approximately seven per cent from the index reading of 40 which marked the position in January, a year ago. During the third quarter of 1932, the oil and fat index reading rose to the 41 point on the chart, an advance of six points from the low point of the year which was 35. Since then, however, approximately two-thirds of the gains have been erased.

The ten commodities used in making up the oil and fat price index are: coconut oil, corn oil, cottonseed oil, yellow grease, commercial olive oil, Niger palm oil, red oil, stearic acid, city extra tallow and winter bleached whale oil. Over the course of the year every item in the list dropped in price, the declines being relatively uniform and averaging from five to ten per cent. All items in the list participated in the third quarter advance, quotations in several cases going above the levels which prevailed in January, 1932.

THE coconut oil market was in weak position at the opening of the year, coast tanks of Manila oil being quoted at $3\frac{1}{4}$ c pound, a cent and a half below the price for the same month of the previous year. Copra was quoted fractionally lower than 2c pound. Strength in the Straits copra market was apparent in late February, with copra quotations advancing a half-cent a pound, and coconut oil prices rising a similar amount. The advance failed to hold and by early June the gains had been erased and copra was quoted at $1\frac{3}{4}$ c pound, with coast tanks of Manila oil at 27sc pound, both figures representing low points for the movement. The advance which occurred in July continued on through late August, the cost of coast tanks going as high as $3\frac{1}{2}$ c pound for a period. With the subsequent reaction, these gains were again lost and at the year-end coast tanks were quoted at the low price of the year, 27sc, with copra at $1\frac{3}{4}$ c.

Tallow followed in a general way the course of coconut oil. The tallow market was more active through the year, as at most times this soap fat was priced more favorably for use than other competing products. In January, 1932, city extra tallow was offered at $3\frac{1}{4}$ c pound, a cent and a quarter below the price prevailing a year previous. The low point was reached in June when quotations dropped for a time to $2\frac{1}{4}$ c pound. In the third quarter recovery the price went as high as 4c pound, and in the subsequent reaction dropped again to $2\frac{3}{4}$ c pound which was the closing figure for the year. Palm oil was also favorably priced for use by the soap industry during 1932, and along with tallow took some of the market interest away from coconut oil.

During the year production of fats and oils was re-



duced materially, some estimates figuring the cut in production as high as twenty-five per cent. With consumption continuing fairly active due to almost normal activity on the part of the soap industry, stocks were reduced, estimates of the reduction of oil and fat supplies in the hands of manufacturers ranging as high as twenty-five per cent. A factor in the reduced production of oils and fats over the past year was the suspension of whale oil production by many of the large companies in this field. Another factor in the reduced supply was the long continuance of abnormally low prices which in many cases made production uneconomic.

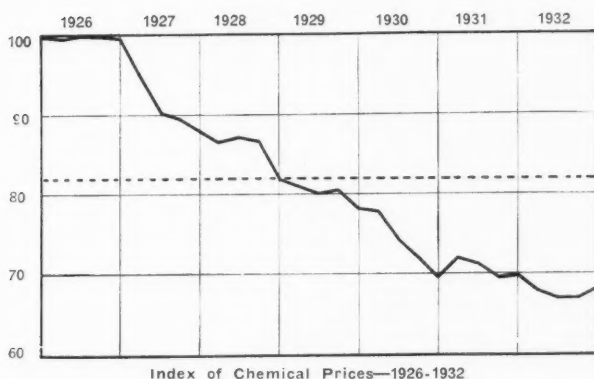
THE index of chemical prices was relatively stable over the year, 1932. There was no definite sustained trend in price movements, and the index closed the year at $68\frac{1}{2}$, only a point and a half removed from the 70 reading at which it stood in January, 1932. The ten weighted items used in making up the index were borax, fullers earth, glycerin, caustic potash, pumice stone, rosin, caustic soda sodium silicate, soda ash and trisodium phosphate. Price changes were mixed during the year, with advances and reduction in various materials at different periods approximately balancing each other. The first change of importance was a reduction in the price of borax which was made late in March. Producers cut prices substantially in a severe competitive battle, the price of borax per ton dropping from \$66 to \$50 on bulk purchases.

Caustic soda prices were officially maintained at \$2.90 per 100 pounds for flake material through the year on spot purchases, although many contracts had been written at figures well below this level. As the year-end approached, there was the usual speculation as to the contract level for the coming year, but the market was somewhat unprepared for the action of producers in increasing the price of both caustic soda and soda ash by \$1.00 per ton. This schedule was not rigidly applied in all cases, however, most contracts being written at the 1932 figures, except in cases where 1932 contracts had been accepted at prices very materially under the general market level.

The rosin market followed rather closely movements in the oil and fat situation. There was a substantial re-

duction in naval stores production and stocks were cut down materially over the course of the year. The 1932 crop was about thirty per cent smaller than that of the previous year, arrivals in the first eight months being some 300,000 barrels below the 1931 total. WG grade gum rosin was quoted at \$6.80 barrel at the year's opening, and at the low point in late June had fallen to \$5.30. It rose to \$5.85 in the third quarter, the price advance being helped along by the assurance that a reduction in the size of the crop could be expected. It was quoted lower subsequently, and closed the year at \$5.70 barrel.

THE chart of essential oil prices shows only a moderate decline for 1932—less than five per cent. While there is still a slight downward tendency in the price of essential oils and other perfuming materials, the rate of decline has become very slow. The price curve has shown a definite tendency to taper out in a way which



leads observers to predict that the next substantial movement will be upward. The ten perfuming materials used in making up the price index are: oils anise, bergamot, cassia, citronella Java, cloves, geranium Bourbon, lavender, rosemary, terpineol and methyl salicylate, weighted according to their relative importance to the soap perfumer. As in the other charts, prices for January, 1926, are taken as the base point. The January, 1932, index reading is 67, the reading for January of this year being three points lower at 64.

Important changes during the year were about equally divided on the upward and downward sides of the market. Oils anise and cassia were weak all through the year, and camphor oil was also reduced substantially at one point. Oils bois de rose and cananga were generally strong through the year, and geranium oil also had a period of strength in the early part of the year when reports of a typhoon on the island of Reunion sent spot prices up. The advance in bois de rose was occasioned by a shortage of stocks in foreign markets, as was the case with cananga. Peppermint oil was also quoted higher over the latter half of the year, due to reports of crop reduction.

The important price reductions of the year seemed to be caused by external conditions rather than by any natural working of the law of supply and demand. Thus the reductions in anise oil, cassia oil and camphor and camphor derivatives were traceable to weakness in exchange of producing countries and necessity of producers to liquidate due to disturbed local conditions.

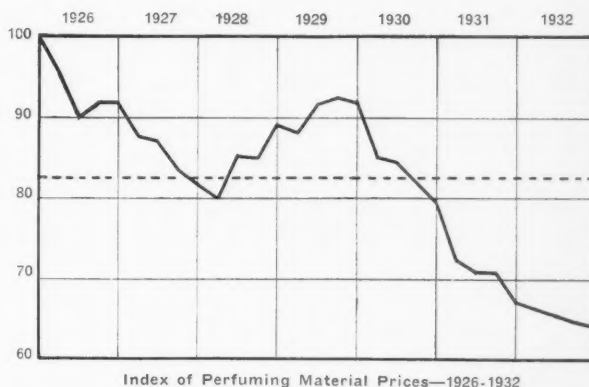
Looking at the 1932 market for soapmaking raw materials in retrospect, one gains the impression that the main bottom of the price curve has probably been reached. The market has shown a desire and an ability to respond to bullish influences when they are encountered. Industry in general seems to have adjusted itself to the conditions encountered in the era of deflation, and seems prepared to move forward from that level. A preliminary essential, however, will be adjustment of intergovernmental obligations and a forward movement in securities and basic commodities.

Stocks of crude cottonseed oil on hand in United States as of Nov. 30, 1932, totaled 147,745,714 lbs., as against 144,127,682 lbs. on the same date in 1931. Stocks of refined oil as of Nov. 30, 1932, were 670,557,712 lbs., as against 346,806,880 lbs., Nov. 30, 1931.

The Bureau of Foreign & Domestic Commerce of the U. S. Department of Commerce has issued a revised catalog of statistical statements, listing data on exports and imports which will be available through 1933. One of the additions to the service this year is a report tabulating coal tar products imports into United States.

The December report of the U. S. Crop Reporting Board estimates production of 12,727,000 bales of cotton for the 1932 crop, ginnings to December 1 amounting to 11,631,361 running bales.

A report on the sesame crop from Hankow, China, indicates that the exportable surplus of the current crop will be less than 50,000 short tons, rather than the 70,000 previously predicted. November exports totaled 5,598 short tons, United States taking 1,450 of this total.





New Packages and Products

NEW products continue their march to market—and old products in new packages. Package improvement to catch the eye and for greater utility to catch the elusive dollar! The new retail package for Baby-San, the well-known liquid olive oil baby soap, sold chiefly to hospitals for obstetrical use, is shown above. Several organizations are involved in the design and construction of the new display carton and bottle. The soap, which is a ninety per cent olive oil product, is made by Huntington Laboratories, Huntington, Ind. The bottle is from Owens-Illinois. The new closure now being used is Kork-N-Seal by Williams Sealing Corp., Decatur, Ill. The product is being displayed and distributed through department and baby specialty stores by the Snuggle Rug Co. of Goshen, Ind. The new bottle has a materially enlarged mouth which permits quicker and easier pouring, especially in cold weather when the liquid soap becomes viscous.

On the right, is a type package altogether new, a non-hygroscopic molded compound in light shades not heretofore obtainable. A molded jar for creams, shaving soaps, or even a de luxe package for hand soap in keeping with the

modern bath room. These new molded jars are said to be resistant to moisture, acids and alkalies, oils and fats, and cannot swell, warp, shatter or bind. In addition to light colors, decorative designs, trade marks, names, etc., can be molded on the jars without extra operations. The material is Durez Molding Compound of General Plastics, North Tonawanda, N. Y. The jars were designed by Industrial Design, Inc.

Two old products are now going to market in new dress. They are Laundo, a laundry compound, and W & S Water softener, manufactured by Ward & Stamm





Co., Adrian, Mich. The packages have been completely redesigned in keeping with the modern idea. The new cartons are shown herewith.

The new Lemon Castile Shampoo package of Walgreen Drug carries the same design on label and carton, yellow background with black lettering. The



silhouette is black and extends on two sides of a silver panel on which the directions are printed. The bottle is by Owens-Illinois and the closure is a black Armstrong Artmold Cap. A practical package in keeping with the newer trend in shampoo package design.

Norda, Inc., New York, formerly located at 121 E. 24th St., is now in new quarters at 601 West 26th St., where 20,000 square feet of space have been taken on a five-year lease.

Pro-Tek, the "Invisible Glove," is a new product of the DeVilbiss Co., Toledo, O., manufacturers of spraying devices. It is a white cream which, when rubbed into the skin before working, forms a protective film soluble only in water. The company states that the new product gives complete protection against sticky substances



and soiling materials such as lacquer, paint, varnish, grease, oil, etc. Washing under running water removes Pro-Tek and foreign matter which has been prevented from adhering to the skin. The makers state that the new product is harmless to the skin and that it leaves no dirty or greasy feeling. Tests have been made, embracing a wide variety of materials including printing ink, battery acid, black lacquer, gasoline, etc., and none of these was able to reach the skin through the protective covering.

Fritzsche Bros., Inc., New York, essential oils, have just issued two charts showing monthly fluctuations in the price of various essential oils over the period from January, 1929, through December, 1932. According to data compiled, current quotations are approximately 50% below the levels of four years ago. The Fritzsche chart indicates that there is still a slight downward trend in essential oil prices, but the rate of decline has dropped considerably over the past year.

The *Cashmere Bouquet* line of Colgate-Palmolive-Peet, used as a trade mark by Colgate since before the Civil War, formerly consisting of soap, talc, and toilet water, has been expanded to include several creams, rouge, lipstick, face powder, and hand lotion. It will be a lower priced line.

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OIL YLANG YLANG
OIL VETIVERT BOURBON

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OIL LAVENDER FLOWERS is obtained from our production unit in PUBERCLAIRE.

OIL VETIVERT BOURBON from our production unit in SAINT-DENIS, Reunion Islands.

OIL YLANG YLANG from our production unit in the COMORO ISLANDS.

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VIGONE, Italy
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ANTALAH, Madagascar
SAINT-DENIS, Bourbon Is.
MESSINA, Sicily

BAMBAO, Comoro Is.
SURABAYA, E. I.
LANGSON, Tonkin
CHUNG-KING, China
TATSIENTLU, China
CAYENNE, Fr. Guiana

Say you saw it in SOAP!

The Case of Coconut Oil— Politics or Science?

(Part I)

BY J. D. CRAIG

Spencer Kellogg & Sons

NO real basis exists for any protection against the importation of Philippine coconut oil. The representatives of the various interests seeking this protection deliberately refuse to consider the actual facts. They persist in confusing the small amount of fats and oils imported for edible purposes with those larger quantities imported for industrial needs. These importations are needed partly to supply a large shortage in our domestic supply of industrial fats, but largely because these foreign fats and oils possess certain inherent characteristics and properties not common to any domestic produced fat or oil, particularly true in the case of coconut oil.

Ordinarily the scientist and certainly the layman is accustomed to think of fats and oils when considering their differences and similarities in terms of their chemical and physical constants, like the iodine number, saponification number, Reichert Meisel number, acid number, titre or melting point, and specific gravity. In a great many instances, the complete picture is not revealed by a consideration of these characteristics; in fact, in many instances a surprisingly erroneous conception may be had, of which coconut oil is perhaps one of the best illustrations.

Although important to have a knowledge of these facts when making comparisons, if one is to gain a complete picture of and understand thoroughly the fundamental differences between the inherent properties of various oils, it is essential to go a step further and examine the chemical composition of the oils. By that I mean to look at the oil not in terms of plain oil with an iodine number of, viz. 105, but as being composed of the glycerides of the different individual fatty acids. Immediately the distinguishing characteristics of the oil become apparent and the reasons for its particular uses are clear.

For a concrete illustration we need only refer to two of our more important drying oils: linseed oil and China wood oil. Ordinarily the iodine number of an oil is taken as an indication of its drying properties but if we used this normal index of drying value in this particular instance we should be completely misled for the simple reason that the iodine value of linseed oil is materially higher than that of wood oil, yet wood oil is a much stronger and faster drying oil than linseed.

By studying the chemical compositions of the two oils, the difference in their physical properties is readily perceptible. The principal constituent of the oil is a glyceride of a fatty acid known as elaeostearic acid which appears, according to present knowledge, to be isomeric with linolenic acid. Elaeostearic acid is formed by three double bonds, each connected by single bonds. This closely conjugated structure of the acid is said to be largely responsible for the rapid drying characteristics of the oil. Incidentally, it contains less than 5% of the glycerides of saturated fatty acids, principally palmitic and stearic. Approximately 75% of the different fatty acids composing wood oil consist of this elaeostearic acid, yet the iodine number of wood oil representing only the iodine absorbed by two of the three unsaturated bonds indicates a composition consisting of a relatively small proportion of three double bond unsaturated fatty acids. Consequently, the chemical constants may be a very unreliable index of the high relative drying power of the oil as compared with the commonly supposed faster drying linseed oil.

Simply because it is not customary to think of the different fats and oils in terms of their chemical compositions, much erroneous and misleading information has been advanced pertaining to the subject of the interchangeability of oils. The ensuing discussion will bring out the degree of falsity of the facts which have been so obviously misconstrued.

In order that the discussion can be easily followed, it is desirable to classify the fats and oils in terms of the major consumable groups of products into which they enter as basic ingredients. Accordingly we may consider the principal outlets to consumption in the following three major fields:

- I. **EDIBLE FATS AND OILS**—Embracing consumption in shortening, margarine, salad and cooking oils, confectionery products, etc.
- II. **SOAP MAKING FATS AND OILS**—Embracing consumption in all types of sodium and potassium soaps for household and industrial purposes.
- III. **DRYING OILS**—Embracing consumption in paints, varnishes, linoleum, printing inks, etc.

Following the order of this classification, I have

prepared a chart to show the comparative compositions of the typical fats and oils consumed in each of the three major groups, placing coconut oil in each group in order that its distinguishing characteristics as compared to each individual fat and oil in every group may be instantly perceptible. From the first glance at this classification, it is obvious that coconut oil possesses a constitution and accordingly inherent properties entirely different from that of any other fat or oil in each respective group. Its unique properties make it absolutely unfitted for use in certain products, yet render it indispensable in the manufacture of many others. From its different composition, it should be apparent to all observers that it is not possible to substitute any other fat or oil for coconut oil if the finished product is to possess the same peculiar characteristics common to it had the proper proportion of coconut oil been used in its manufacture.

Coconut Oil and the Edible Oils

COCONUT oil does not contain in any appreciable percentage the fatty acids which make up the principal component parts of the fats and oils of American agriculture used almost exclusively for edible purposes,

namely, lard, cottonseed, corn, and peanut oils. The one foreign oil, sesame, is included to show the close similarity of its composition to that of our domestic vegetable oils. All of these domestic vegetable oils contain appreciable percentages of the fatty glycerides of oleic and linoleic acids, but not such a high percentage of palmitic and stearic acids. By the process of hydrogenation a portion of the oleic acid is converted into stearic acid and practically all of the linoleic acid is converted into fatty acids of oleic and stearic. By this process, the chemical composition of the vegetable oil may be changed to resemble that of lard, containing more of the fatty acids of oleic, palmitic, and stearic, and less of linoleic acid.

Now, when referring to coconut oil you will observe that it contains only 2% of any unsaturated fatty acid, namely, oleic. At the same time it possesses only a relatively small proportion of palmitic and stearic acids, actually only 12%; the remaining fatty acids consisting of myristic, lauric, capric, caprylic, and caproic, as you will observe from the chart, not being present in any of the other fats and oils except in amounts too small to be of consequence.

It is common knowledge that the fats and oils which possess the most desirable properties for use in shorten-

COMPARATIVE COMPOSITIONS

GLYCERIDES OF	EDIBLE GROUP						
	(1) COCONUT OIL	(2) LARD	(3) COTTON SEED OIL	(4) CORN OIL	(5) PEANUT OIL	(6) SESAME	(7) COCONUT OIL
I SATURATED FATTY ACIDS							
Of the Formula							
$C_6 H_{12} O_2$							
CAPROIC $C_6 H_{12} O_2$	2.0						2.0
CAPRYLIC $C_8 H_{16} O_2$	9.0						9.0
CAPRIC $C_{10} H_{20} O_2$	10.0						10.0
LAURIC $C_{12} H_{24} O_2$	45.0						45.0
MYRISTIC $C_{14} H_{28} O_2$	20.0		0.4				20.0
PALMITIC $C_{16} H_{32} O_2$	7.0	24.6	20.0	7.3	7.3	7.3	7.0
STEARIC $C_{18} H_{36} O_2$	5.0	15.0	2.0	3.3	5.5	4.4	5.0
ARACHIDIC $C_{20} H_{40} O_2$			0.6	0.4	3.6	4.0	
BEHENIC $C_{22} H_{44} O_2$							
LIGNOCERIC $C_{24} H_{48} O_2$				0.2	2.9	0.4	
II UNSATURATED FATTY ACIDS							
Of the Formula							
$C_{18} H_{34} O_2$							
OLEIC $C_{18} H_{34} O_2$	2.0	50.4	35.0	43.4	56.7	46.0	2.0
PALMITOLEIC $C_{16} H_{30} O_2$							
$C_{18} H_{32} O_2$							
LINOLIC $C_{18} H_{32} O_2$		10.0	42.0	39.1	23.1	35.2	
$C_{18} H_{30} O_2$							
LINOLENIC $C_{18} H_{30} O_2$							
ELAEOSTEARIC $C_{18} H_{30} O_2$							
$C_{22} H_{40} O_2$							
CLUPANDONIC $C_{22} H_{40} O_2$							
APPROXIMATE RANGE OF							
Iodine Value	7.5-9.5	53-61	105-115	115-125	90-95	188-193	7.5-9.5
Saponification Value	252-260	196-197	191-195	189-193	187-188.5	104-114	252-260
Solidifying Point in °F	73-75°	80-86	35°-28°	10-14°F	32-28°F	32°-25°F	73-75°
Titer °C							21-23

(1) Elsdon—Analyst, 38, 8 (1913)

(2) Myddleton and Barry,

Fats: Natural and Synthetic—London 1924 (P. 14)

(3) Jamieson and Baughman—Analyst, 1920, 45, 303

(4) Jamieson and Baughman,

J. Am. Chem. Soc. 43, 2686 (1921)

(5) Jamieson, Baughman and Brauns,
Analyst 1921, 46, 457

(6) Jamieson and Baughman,
J. Am. Chem. Soc. 46, 775 (1924)

(7) Elsdon—Analyst, 38, 8 (1913)

(8) E. F. Armstrong and J. Allen,
J. Soc. Chem. Ind. 42, 2077 (1924)

ing and cooking oils, contain large percentages of oleic, palmitic, and stearic acids and relatively no proportion of the lower molecular weight fatty glycerides, many of which are described as the volatile and soluble fatty acids. By comparing the composition of coconut oil with that of these other vegetable oils, it can readily be seen that there are no possible means by which the chemist, through the process of hydrogenation, may alter the composition of coconut oil to embody in it the properties inherent in these other oils, for the simple reason that nature has put only 2% of the unsaturated fatty acids in coconut oil.

From a study of the composition of this group of edible fats and oils, it is not difficult to understand why they are particularly adapted to their respective uses in shortening, vegetable lard, compound, salad oils, mayonnaise, etc. From the same study it is just as easy to understand why the peculiar properties imparted to coconut oil, by reason of its different composition, make it completely unfitted for use in any of these same products. These lower molecular weight fatty acids in coconut oil are more volatile, consequently, upon heating, the oil has a tendency to smoke at comparatively much lower temperatures. If moisture is present it will sputter and foam to a very dangerous degree; in fact, to

the extent that it would be hazardous to use in the home in the manner the housewife is accustomed to use lard or some of the better known cottonseed oil shortenings.

By reason of these low molecular weight saturated fatty acids, coconut oil has the unique property of passing rapidly from a solid to a liquid, or from a liquid to a solid, within a comparatively narrow range of temperature. This is not true of the other fats and oils in this edible group. For that very reason coconut oil is not adapted to use in the preparation of salad oils or mayonnaise. In the first place it cannot be emulsified in the same manner as an oil containing an appreciable percentage of oleic acid. In the second place, if it could be emulsified, its solidifying point is too high to permit its use in the preparation of a salad dressing, because as soon as the temperature falls appreciably below 76°, the coconut oil immediately solidifies to a hard brittle mass.

As previously stated, the fats and oils possessing the most desirable properties for use in shortening contain large percentages of oleic, palmitic, and stearic acids, none of which are present in coconut oil. It is interesting to note that even though the temperature at

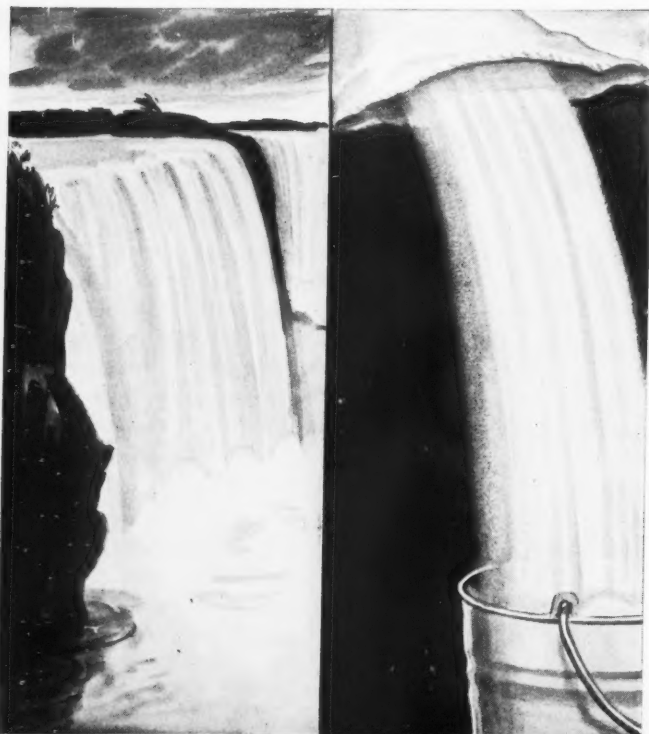
(Turn to Page 44)

OF TYPICAL FATS AND OILS

SOAP GROUP					DRYING GROUP			
(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
PALM KERNAL OIL	TALLOW	PALM OIL	WHALE OIL	MENHADEN OIL	COCONUT OIL	LINSEED	WOOD OIL	SOYA BEAN
None					2.0			
3.0					9.0			
6.0					10.0			
50.0					45.0			
16.0	2.0	0.6	8.0		20.0			
6.5	29.0	44.0	12.0		7.0	2.7	3.7	6.5
1.0	24.5	2.9		Composition of Menhaden Oil practically same as Whale Oil.	5.0	5.4	1.2	4.2
		0.1						0.7
								0.1
16.5	44.5	43.2	25.0		2.0	5.0	13.6	32.0
			17.0					
1.0		9.5	20.0			48.5		49.3
						34.1		2.2
			18.0				72.8	
16-20	40-45	50-54	105-135		7.5-9.5	180-190	162-170	131-136
244-255	193-195	195-200	192-196		252-260	190-195	190-194	192-194
77-80°	95-100	90-100			73-75°	-5°F	40°F	10°-5°F
22-24	39-41	39-46	Any degree desired					

- (9) Myddleton and Barry.
Fats: Natural and Synthetic—1924 (Page 111)
(10) Jamieson and Baughman.
Vegetable Fats and Oils—(P. 109)
(11) Myddleton and Barry.
Fats: Natural and Synthetic—1924 (Page 110)

- (13) Elsdon—Analyst, 38, 8 (1913)
(14) Coffey,
J. Am. Chem. Soc. 1921 119-1414
(15) Steger and Van Loon (1928)
J. Soc. Chem. Ind. 47, 3617
(16) Jamieson and Baughman (1922)
J. Am. Chem. Soc. 44, 2947



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Polishes and Cleaners For Metal Surfaces

A Review and Discussion of the Patent Literature

Part II

By Dr. Foster D. Snell

THE use of general metal polishing pastes has in the past been a large field. Its use has contracted in recent years until the rediscovery about 1923 that Vienna lime pastes were very useful for cleaning nickel, a fact known to every manufacturer of buffing compounds but apparently new in the retail field. Chromium plate soon deflated the small boom created in nickel cleaners that developed, and today there are but few manufacturers of paste metal polishes for brass or nickel. Liquids are more convenient for most purposes.

There remains the engine room product consisting of an abrasive in a non-volatile grease base used on hot boilers. Several such pastes are summarized in Table 5. Buffing compounds are included in this field as they differ only in hardness from the true pastes.

Polishing of iron is covered by so simple a mixture (924,604) as 20 per cent carborundum or emery and 80 per cent petroleum hard oil. Another paste (1,588,290) contains 82.5 per cent cement, 7.5 per cent pumice, 7.5 per cent emery and 2.5 per cent fuller's earth mixed with a blend of equal parts of cutting oil and kerosene. It is designed for use on iron. Yet another (Eng. 16,979) is prepared by heating lead in cottonseed oil for 10 days. A mixture (957,999) consisting of mineral oil, emery and pieces of steel or brass is used in a tumbling barrel. Another (1,624,783) is 10-20 per cent of metal dust together with pumice and sufficient oil to make a paste.

Others are (British 15,957 ('11)) slaked lime and tallow; (British 15,958 ('11)) mutton tallow or palm oil and Vienna lime; and (British 199,993) 42 per cent of soft clay and 21 per cent of water with 10 per cent of melted stearic acid and 27 per cent of petroleum thinner.

A metal cleaner (Fr. 686,170) contains 70 per cent magnesite, 15 per cent mineral oil, 3 per cent oleic acid, 6 per cent alcohol, 6 per cent ammonium chloride and a trace of thymol. A cleaner (Can. 282,808) which is probably on the American market contains powdered abrasive, stearic acid, Japan wax, kerosene and light rubbing oil, free from paraffin. Another paste (Swiss 77,829) contains 69 per cent of powdered silicious rock, 6 per cent of turpentine, 15 per cent olive oil and 10 per cent petrolatum. One which would be a paste at normal temperatures (Brit. 302,423) contains 14 per

cent of tallow, 7 per cent coconut oil, 7 per cent peanut oil, 29 per cent tripoli, 29 per cent polishing earth, 7 per cent paraffin oil and 7 per cent gasoline.

A well known type for use on the buffing wheel (1,058,187) contains stearic acid with 4-5 times its weight of slaked lime and a relatively small amount of powdered lead. Another (1,632,909) contains tripoli, stearic acid and wax together with a metal powder which will react readily with an alkaline cleaning bath. Yet another (1,822,596) contains 6.3 per cent glue, 10.6 per cent water, 12.7 per cent ethylene glycol and 70.4 per cent silica.

For polishing chromium plate (1,750,288) green chromic oxide is mixed with stearin, with or without kerosene added. Another chromium polish (1,806,414) comprises calcined alumina, of a hardness materially less than that of emery and another (Brit. 277,296) is aluminum oxide in stearic acid, wax, etc.

Polishing Cloths

THE non-volatile or only slightly volatile part of a naphtha base type polish incorporated in a suitable cloth is merchandised for polishing of base metals. Similarly, fine abrasives are incorporated for gold and silver.

One (Brit. 196,502) is impregnated with 25 per cent aqua ammonia, 25 per cent whiting and 50 per cent water. Another (Swiss 72,086) is soaked in 25 per cent water, 46 per cent neutral soap, 2 per cent olive oil, 10 per cent aqua ammonia, 2 per cent emery and 18 per cent tripoli. Another (Swiss 75,795) contains soap, oleic acid, hydrated lime, two grades of iron oxide, chalk, Armenian bolus, salt and pigment.

Somewhat more detail is furnished with the patent on another (Brit. 342,978). Cotton and wool fibers are blended in the fabric. This is sprayed with a solution of 60 per cent magnesium sulfate, 35 per cent aluminum sulfate and 5 per cent magnesium chloride; immersed in crude glycerine; passed between heated rollers smeared with tallow and finally impregnated with 15 per cent oleic acid, 5 per cent aqua ammonia, 35 per cent Silesian chalk and 45 per cent gasoline.

A cloth (1,579,435) much like some on the market contains 37 per cent hard silica, 43 per cent petrolatum and 15 per cent stearic acid. Another cloth (1,707,485)

of loosely woven texture uses whiting with tin oxide or rouge and rosin as a binder. Another (1,808,834) contains 90 per cent chalk, 8 per cent sodium carbonate and 2 per cent sodium chloride, and another (British 14,963 ('14)) acid treated diatomaceous earth, acid treated pumice, iron oxide or other color, rottenstone, emery or carborundum, precipitated chalk, ammonium oxalate, soap, oleic acid and turpentine.

One cloth (1,143,614) is impregnated with magnesium sulfate and dried. It is then impregnated with 8 per cent oleic acid, 2 per cent petrolatum, 8 per cent aqua ammonia, 2 per cent glycerine and 40 per cent each of whiting and tripoli suitably made up in water. A pad for metal or varnished surfaces (1,690,960) contains a mixture of 10 per cent powdered horn, 20 per cent powdered squid shell and 70 per cent powdered pumice bound with gelatine in hair felt. As closely related to a polishing cloth 574,449 calls for the use of a sponge impregnated with rubber, sulfur and an abrasive and vulcanized.

Polishing Wheels

THESE are commercially classified as polishing wheels and cutting wheels, a distinction which will readily follow from the composition of the few quoted. As a wheel (1,099,831) 17 per cent emery and 34 per cent shellac are used with 49 per cent rosin which has been heated to the volatilization point for about 2 hours. A milder one (1,196,234) is composed of boiled linseed oil, gum, resin and granulated cork. Phenolic resins may be used as a binder (1,537,454) for carborundum wheels. A stone for polishing copper (1,718,827) contains 25 per cent tripoli, 5 per cent rottenstone and 1 per cent sugar with 50 per cent litharge and 19 per cent glycerine as binder.

Another polishing wheel (785,231) has the abrasive embedded in rubber, together with hair and coloring matter. Another (841,903) consists of abrasive, red lead, sodium silicate and sawdust, from which the sawdust is burned out to render the wheel porous.

Polishing Powders

IN addition to the usual abrasives many others have been claimed. One (1,704,308) specifies titanium oxide and a titanium salt, unroasted, and another (1,749,317) is composed of wheat middlings and diatomaceous earth. English 4819 (1909) specifies magnesite as an abrasive. This is substantially the same as chalk.

Other simple abrasives are one (Swedish 12,469) (Norwegian 28,365) prepared by heating brick dust to redness and immersing in water; a residue from borax (Danish 21,422) containing chalk, sodium borate and water, dried and pulverized for use; zirconium oxide (Ger. 230,575); paper ash (Ger. 233,624); ferric titanate (Fr. 481,099); and barium sulfate made by precipitation of barium chloride with sulfuric acid. (Repert. pharm. (3) 22, 195-6.)

A polishing powder contains 2 parts of asbestos powder and 1 part of cotton waste ignited to redness and colored with rouge or mineral color. Another (Brit. 248,209) contains 60 per cent of silica, 10 per cent of alumina, 15 per cent of sodium carbonate and 15 per cent of soap.

For cleaning type metal (Ger. 514,726) a mixture of charcoal, borax and alkaline earth sulfides is used with or without rosin, ammonium chloride, sodium hydroxide and sodium carbonate.

Elementary powders contain (British 296,875) 60 per cent chalk, 30 per cent aqua ammonia, and 10 per cent "Reckitts Blue Powder," or (Swiss 77,897) 75 per cent clay, 20 per cent wood flour and 5 per cent sodium carbonate. Sodium metasilicate and sodium carbonate (Hungarian 99,377) with or without abrasive is used for cleaning and polishing metals. One cleaner (Norwegian 43,782) contains 55 per cent sawdust, 5 per cent casein, 10 per cent soda soap and 30 per cent diatomaceous earth, another (937,170) 9 per cent ground cork, 55 per cent powdered cement, 18 per cent powdered emery, 9 per cent soda ash and 9 per cent powdered camphor.

A polishing powder (1,128,287) is obtained by satu-

Patent Number	Silica	Tallow	Saponifiable oil	Paraffin oil	Rouge	Tripoli	Vienna lime	Rottenstone	Clay	Beeswax	Oil of Mirbane	Kerosene	Glycerine	Water
282,913 .....	..	10	7	..	25	45	10	..	..	..	3	..	..	..
847,098 .....	..	6	..	25	..	50	..	6	..	..	..	..	..	13 stearin
952,906 .....	..	35	..	..	..	35	..	..	..	9	..	9	..	3 camphor gum
972,638	52	..	..	16	..	..	..	..	..	..	..	16	..	9 linseed oil
1,662,582 .....	..	..	..	2	..	51	..	18	..	..	..	16	..	2 carnauba wax
1,743,865 .....	..	14	..	..	..	..	44	..	..	..	..	28	..	2 stearic acid
														5 aqua ammonia
														7 amyl acetate
														6 Japan wax
														4 stearic acid
														14 stearic acid

Table 5—Grease Base Pastes

Figures are Percentages

rating cotton cloth with 25 per cent magnesium nitrate solution and ashing. The ash is used for polishing metals as well as teeth, finger nails, etc. Another powder (1,216,643) designed for use on iron, contains 20 per cent powdered aluminum, 30 per cent dehydrated alum and 50 per cent silica. A paste, or when dried a powder (1,498,642), contains 48 per cent sand, 48 per cent soap powder, 4 per cent onion juice and kerosene to produce a paste.

Others are (890,946) 10 per cent asbestos, 60 per cent magnesite and 30 per cent talc; (951,676) 40 per cent talc, 40 per cent whiting, 19 per cent barytes and 1 per cent vermilion, and (1,145,920) 12 per cent whiting, 85 per cent precipitated chalk and 3 per cent rouge.

A simple acid product (Brit. 181,840) contains 96 per cent tripoli and 4 per cent oxalic acid with a trace of amyl acetate. One more complex (Brit. 324,026) contains a more active metal than that to be polished with a non-poisonous acid such as citric or tartaric and an abrasive such as diatomaceous earth.

Cleaners recommended for aluminum contain (Brit. 332,530) 40 per cent soap powder, 20 per cent sodium carbonate, 20 per cent trisodium phosphate and 20 per cent liquid sodium silicate or (1,491,456) 40 per cent aluminum oxide, 40 per cent tartaric acid and 20 per cent aluminum sulfate.

Various mixtures include (British 29,241 ('06)) emery, whiting, bath brick and charcoal; (British 13,047 ('07)) burnt and ground dolomite; (British 4,819 ('09)) anhydrous magnesium carbonate; (British 30,233 ('09)) powdered, calcined cannel coke; and (British 19,841 ('11)) calcium sulfate and sawdust.

Abrasiveless Polishes

OFTEN a polish is claimed for diverse purposes, such as metals and varnish. The problems are so different that but few of the polishes without abrasive will even clean metals. Some of those mentioned for polishing metals are as follows:

854,448—33 1/3 per cent boiled linseed oil, 33 1/3 per cent vinegar, 33 1/3 per cent kerosene.

1,317,171—20 per cent oil of citronella, 10 per cent butter of antimony, 10 per cent peanut oil, 40 per cent paraffin oil, 10 per cent vinegar.

1,359,401—60 per cent paraffin oil, 20 per cent soya bean oil, 10 per cent turpentine, 10 per cent gasoline.

1,473,947—12 per cent water, 0.4 per cent oil of sassafras, 0.7 per cent kerosene, 0.7 per cent turpentine, 6 per cent motor oil, 74.2 per cent gasoline and 6 per cent Bon Ami, of which the sediment is thrown away.

1,519,907—1 gallon of water containing 1 ounce of glycerine and 2 drams of crystallized sodium sulfate.

862,305—9 per cent alcohol, 1 per cent sodium hydroxide, 45 per cent paraffin, 45 per cent paraffin oil.

967,777—50 per cent paraffin oil, 25 per cent turpentine, 12.5 per cent alcohol, 12.5 per cent vinegar.

1,196,508—16 per cent ceresin, 4 per cent beeswax, 4 per cent paraffin, 12 per cent linseed oil, 64 per cent turpentine, a trace of carbolic acid.

1,211,188—29 per cent fresh buttermilk, 3 per cent salt, 30 per cent paraffin oil, 13 per cent turpentine, 13 per cent denatured alcohol, 13 per cent water and a minor amount of oil of cedar leaf and dye.

1,639,316—27 per cent cylinder oil, 73 per cent gasoline and traces of beeswax and varnish.

1,658,107—10 per cent soap, 30 per cent rice hull ash, 60 per cent water and a trace of cocoanut oil.

1,663,446—40 per cent water, 8.4 per cent sulfuric acid, 7 per cent anhydrous manganese sulfate, 3 per cent tannic acid, 22.4 per cent denatured alcohol, 8 per cent butyl alcohol, 11.2 per cent acetone.

1,665,465—25 per cent phosphoric acid, 40 per cent methyl ethyl ketone, 35 per cent water.

1,707,031—82 per cent sodium phosphate, 12 per cent soda ash, 6 per cent soluble oil base.

1,709,819—Diluted juice of partially decayed oranges, lemons, pineapples and bananas.

1,725,245—1 per cent sodium bicarbonate, 1 per cent salt, 30 per cent soap and 66 per cent solution of the gum of the chicken grape vine.

1,733,389—25 per cent kerosene, 25 per cent paraffin, 50 per cent cup grease.

1,736,375—37 per cent bentonite, 9 per cent sulfuric acid, 18 per cent flour and 36 per cent salt.

1,752,746—35 per cent phosphoric acid, 20 per cent monobutyl ether of ethylene glycol, 45 per cent water.

1,795,676—75 per cent salt, 1 per cent quinine chloride, 15 per cent magnesium sulfate, 1 per cent indigo color.

1,815,599—64 per cent lard, 24 per cent paraffin, 6 per cent naphtha, 6 per cent glycerine.

Brit. 206,004—20 per cent white shellac, 2 per cent palm kernel fatty acid and 78 per cent alcohol.

Fr. 675,063—vaseline, benzine, amylacetate and aniline.

Belg. 360,777—water, turpentine, ammonia, oleic acid, petroleum oil and nitrobenzene.

Fr. 351,384—25 per cent aluminum, 5 per cent of sulfur and 70 per cent of varnish.

Ger. 512,838—neutral soap, salts of organic acids and alcohol.

1,026,883—a vehicle of 45 per cent copal varnish, 45 per cent linseed oil, 4 per cent turpentine and 6 per cent asphaltum with which graphite has been mixed to the consistency of a paint.

Of the multitudes of recent patents on wetting agents applicable to metal surfaces a typical example is (Ger. 523,505) the use of propylated or butylated naphthalene-sulfonic acid. For metal cleaning baths (Ger. 513,454) hydrosulfite is added to alkaline cleaning baths to remove oxide from the metal surface.

An acid cleaner for metal (Brit. 340,047) (Brit. 340,323) contains phosphoric, acetic, citric or other acid, methyl ethyl ketone, burnt sienna, and possibly charcoal or lampblack. Another (Brit. 341,974) contains clay, oil solvent, water and phosphoric acid. Others are (Fr. 695,914) monoammonium or monosodium phosphate

(Turn to Page 49)



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Lever Opens London Retail Store

The first "grocery" to be established in Britain has just been opened in London under the title of "Help Yourself Stores." It is a subsidiary of Lever Bros., Ltd. About 500 different household commodities are stocked, being arranged on shelves, each commodity with its price plainly marked. On entering the customer is given a large shopping basket into which she places what she takes from the shelves. On leaving the shop she takes the basket to the cash desk, where the goods are checked and paid for, and put into a carrier or bag.

Unilever Takes 280,000 Tons Whale Oil

The purchase by Unilever, Ltd., of practically the entire whale oil output of the 1932-33 season, which was announced from Oslo, may mark a recovery in the whaling industry. The purchase price was £13 per ton. Provided that all the expeditions make full catches, the sale will comprehend 280,000 tons, of a value of about 71,000,000 kroner, of which 50,000,000 kroner will go to Norwegian companies. There are excluded from the sale sufficient quantities to cover the demands of certain independent buyers, including the Procter & Gamble Co. until next season's catch is marketed. Even if the price is regarded as unsatisfactory by the whalers, the sale is generally looked upon as a very important cleaning up of the market and as promising improved conditions next year. It is understood that the companies have agreed to curtail production also next season and to maintain the sales association.

Walter F. Platt, Jr., formerly assistant manager of the eastern sales division, of Archer-Daniels-Midland Company, New York office, has opened an office for the same company in the Philadelphia Saving Fund Building, Philadelphia. In addition to the Archer-Daniels-Midland Company linseed oils Mr. Platt will be in charge of sales in Philadelphia and vicinity for The Werner G. Smith Company, china wood oil and fish oils; Cook Swan Company, Inc., whale, sperm and fish oils, spermaceti and hydrogenated oils; William O. Goodrich Company, soya bean oil; The Wyandotte Oil & Fat Company, hydrogenated oils and synthetic stearic acid.

The duty on American imports of shaving soap into Cuba has recently been reduced to 30c per kilo, plus 12% ad valorem and 10% surtax. Imports of this type have been reclassified as toilet soaps rather than articles of perfumery.

Charles S. Benjamin, for the past twenty years with the General Chemical Co. in the operations and sales departments, became associated with the executive sales division of the Swann Chemical Co. at New York on January first.

Gilbert Colgate Dies

Gilbert Colgate, former president and later chairman of the board of Colgate & Co., died of a heart attack, January 5, at his at 1100 Park Avenue, New York. Mr.



Gilbert Colgate

Colgate was born in Orange, N. J., Dec. 15, 1858, the son of Samuel and Elizabeth Ann Morse Colgate, and a grandson of William Colgate, founder of Colgate & Co. He was one of five brothers who succeeded to the control of the firm on the death of their father. The other brothers were Sidney M. Colgate, Colonel Austen M. Colgate, Richard Colgate and Russell Colgate, of whom only Russell Colgate survives.

Gilbert Colgate was graduated from Yale University in 1883, and immediately became associated with his father's firm. He married Florence Buckingham Hall of Buffalo in 1888. In 1919 he was elected to the presidency of the firm and later served as chairman of the board. Upon the formation of Colgate-Palmolive-Peet Co., Mr. Colgate was made a member of the board of directors in which capacity he has continued to serve. Mr. Colgate was a leader in religious and social welfare work and was active in many groups in this field. He is survived by his brother, Russell Colgate, three daughters, Mrs. J. Wright Rumbough, Mrs. Stanley Maddox Rumbough and Mrs. Edwin St. John Greble, Jr., and two sons, Robert Bangs Colgate and Gilbert Colgate, Jr.

Colgate-Palmolive-Peet Co. plans an extension of its combination offer of two tubes of Colgate's dental cream and a tooth brush for 49c as one feature of its 1933 advertising campaign. The offer which has been well received in the Middle Western market will be extended to the whole country.

Even M. Tysdal, for the past three years St. Louis manager for Ungerer & Co., New York, essential oils, has been transferred to Chicago where he will be in charge of the new office at 325 Huron Street. Clifford L. Iorns has been made manager of the St. Louis office with headquarters at 619 Clark Ave. He is returning to Ungerer & Co. after an absence of three years.

In a recent ruling on the status of combination packages of toilet preparations for purposes of taxation, the Acting Commissioner of Internal Revenue has ruled that if the contents of the container are separately invoiced, the tax may be paid at the separate rates for each article, instead of at the highest rate due on any of the contents, as past practice has been.

Soap Prices Cut 10 to 20%

A reduction in soap prices came with the opening of business for 1933. Price cuts were made in toilet soap case goods by two leading manufacturers on advertised brands in their new jobbers schedules for the year. Numerous smaller manufacturers followed suit. Although the cuts were confined mostly to toilet soaps, some cuts in laundry soaps were also made. Price reductions ranged from ten to twenty per cent, plus the absorption in some cases of the Federal tax of five per cent on toilet soaps.

Labor Costs in Cuban Soap Trade

Wages in the manufacture of soap, candles and perfumery in the Cuban industry vary greatly due to competition, according to an article in a recent issue of *Monthly Labor Review*. Considerable piecework is still done, particularly by the women in the larger factories, who earn from \$1 to \$2 a day wrapping and packing these commodities. Male workers in these factories, who are shifted about quite a bit from one task to another during dull seasons, earn from \$1.20 to \$5 a day, depending upon their qualifications for being transferred from one department to another. At present no overtime is required in these factories. Clerical work in the offices of these factories is now being obtained at from \$60 to \$75 a month. Skilled workers in one particular factory in Habana are receiving 25 cents an hour; unskilled laborers, 18 cents; and girls, 10 cents.

Crown Offers New Cap

One of the most important products developed by the Crown Cork & Seal Co. in recent months is the Crown One Piece Vacuum Screw Cap which is being announced to the trade at this time. This new closure is a screw or Mason cap with the Crown deep hook shaped threads and having a composition rubber ring as a liner. It seals hermetically and will hold a vacuum indefinitely. In the new Crown cap, sticking of the rubber ring to the sealing surface, has been overcome by use of a patented compound, developed in the Crown Cork & Seal laboratories. This compound does not stick to the glass. One of its constituents lubricates it in such a way that it slips or slides on glass, assuring easy removal of the cap.

According to the announcement, the new cap seals hermetically, holds a vacuum indefinitely, is easily applied, easy to remove and also reseals the package hermetically after the cap has once been removed. It does away with the discs formerly used in vacuum caps and provides a better and cheaper vacuum cap for all sorts of products. At present, Crown One Piece Vacuum Screw Caps are offered in the larger sizes. Other sizes will be made available as the demand warrants.

T. R. Babbitt Soap Co. has been organized in Buffalo to manufacture soap and soap products. Incorporators are Thomas Babbitt, Gordon Kaier and Leo Canton.

SECURITY PRICES

PRICES of stocks of soap, chemical, insecticide, and allied companies as quoted on the New York Stock Exchange, Curb Exchange, other exchanges and over-the-counter are given in the following table. This table of prices is compiled monthly for *Soap* by a representative of one of the oldest and best-known brokerage houses in New York.

	High 1932	Low 1932	Dec. 1 1932	Jan. 3 1933
Allied Chem.	88 $\frac{1}{4}$	42 $\frac{1}{2}$	72 $\frac{3}{4}$	81
Am. Agric. of Del. . .	15 $\frac{1}{2}$	3 $\frac{1}{2}$	8	9 $\frac{1}{2}$
Amer. Cyan. "B" ...	8 $\frac{1}{2}$	1 $\frac{5}{8}$	3 $\frac{3}{4}$	4 $\frac{1}{8}$
Armour of Ill. "A" ..	23 $\frac{3}{4}$	$\frac{5}{8}$	1 $\frac{1}{4}$	1 $\frac{1}{2}$
Bon Ami "A"	55	31	53 $\frac{1}{8}$	51 $\frac{7}{8}$
Brillo	8 $\frac{5}{8}$	4	4	4
Colgate, P. P.	31 $\frac{1}{2}$	10 $\frac{1}{4}$	12	12 $\frac{3}{8}$
Consolidated Oil Co. 9		4	5 $\frac{7}{8}$	5 $\frac{1}{2}$
Corn Prod.	53 $\frac{3}{8}$	24 $\frac{3}{4}$	48 $\frac{5}{8}$	53 $\frac{1}{2}$
Coty	7 $\frac{3}{8}$	1 $\frac{1}{2}$	3 $\frac{3}{4}$	4
Dow Chem.	40	21 $\frac{1}{2}$	32	31
Drug, Inc.	57	23	32 $\frac{3}{4}$	36
Du Pont	59 $\frac{3}{4}$	22	35 $\frac{1}{4}$	36 $\frac{7}{8}$
Glidden	10 $\frac{3}{8}$	3 $\frac{1}{8}$	5 $\frac{1}{2}$	5
Gold Dust	20 $\frac{5}{8}$	8 $\frac{1}{4}$	15 $\frac{1}{8}$	15
Gulf Oil	44 $\frac{3}{4}$	23	29	26 $\frac{1}{2}$
Int. Agri.	3 $\frac{1}{2}$	$\frac{1}{4}$	1	1 $\frac{1}{4}$
Lehn & Fink	24 $\frac{1}{4}$	6	16 $\frac{1}{8}$	18
Mathieson	20 $\frac{7}{8}$	9	13 $\frac{1}{2}$	15 $\frac{3}{4}$
McKess. & Rob.	6 $\frac{1}{2}$	1 $\frac{1}{8}$	3	2 $\frac{5}{8}$
Monsanto	30 $\frac{3}{4}$	13 $\frac{3}{8}$	27 $\frac{1}{4}$	28
Proc. & Gam.	42 $\frac{3}{4}$	19 $\frac{7}{8}$	28 $\frac{7}{8}$	28 $\frac{7}{8}$
Shell Union	8 $\frac{3}{4}$	2 $\frac{1}{2}$	5 $\frac{1}{2}$	5 $\frac{3}{8}$
Sher. Will	35	13 $\frac{1}{2}$	18	14 $\frac{1}{2}$
S. O. of Cal.	31 $\frac{7}{8}$	15 $\frac{1}{8}$	24 $\frac{1}{2}$	24 $\frac{1}{4}$
S. O. of Ind.	25 $\frac{1}{8}$	13 $\frac{1}{8}$	22 $\frac{5}{8}$	21 $\frac{3}{4}$
S. O. of N. J.	37 $\frac{3}{8}$	19 $\frac{7}{8}$	30	30
S. O. of Ohio	30 $\frac{1}{8}$	15 $\frac{1}{2}$	21 $\frac{1}{2}$	20
Swift & Co.	22	6 $\frac{5}{8}$	7 $\frac{3}{4}$	7 $\frac{1}{2}$
Union Carb.	36 $\frac{3}{8}$	15 $\frac{1}{2}$	23 $\frac{3}{4}$	25 $\frac{1}{2}$
Westvaco	12 $\frac{5}{8}$	3	7	6 $\frac{1}{4}$
Wilson & Co.	13 $\frac{1}{4}$	$\frac{5}{8}$	7 $\frac{1}{8}$	7 $\frac{1}{8}$

Armour & Co. reported an operating loss of \$3,857,565 for the fiscal year ended Oct. 29 as compared with a loss of \$17,339,136 in the previous year.

The Mennen Company, Newark, N. J., according to an announcement credited to W. G. Mennen, president of the company, have eliminated free goods from their list and reduced prices proportionately.

Pneumatic Scale Corp., Quincy, Mass., is distributing a four-page folder describing its new rotary screw-capping machine.

CHICAGO TRADE NOTES

THE annual business meeting and election of officers of the Chicago Perfumery, Soap and Extract Association was held on Wednesday, December 21, having been postponed on account of the banquet imminent at the first of the month. The nominees were elected unanimously. They were: President, Dudley F. Lum, of Givaudan-Delawanna, Inc.; Vice-president, Walter H. Jelly, of Walter H. Jelly & Co.; Secretary-Treasurer, W. Kedzie Teller, of The Columbus Laboratories. Dudley Lum is widely known in the midwestern trade. He became associated with George Lueders & Co. in 1906, in New York, and in 1909 came to Chicago as their representative. This he remained until 1924, when he became a partner in the firm of Lum & Lemmermeyer. In 1926 he became manager of the midwestern branch of Givaudan-Delawanna, Inc., which office he now holds. This career was interrupted during the war, when, from 1917 to 1919, he served as a First Lieutenant in the 46th U. S. Infantry. Walter Jelly, as vice president, is also well known, since he established, in the middle twenties, the firm of Walter H. Jelly & Co. The retirement of William H. Schutte, as Secretary-Treasurer, after a record of three years service was accepted with regret by the members. The press of new business connections, however, made it unavoidable. The association's new Executive Committee will consist of Dudley F. Lum, Walter H. Jelly, W. Kedzie Teller and in addition to these three officers, Donald M. Clark, of Franco American Hygienic Co., who retires as president for the second time, and Harold E. Lancaster, who has also been twice president. The new officers took charge officially at the first meeting of the new year, which was on Tuesday, January 10.

The Drug and Chemical Stag Banquet, on December 22, was attended by practically the entire association membership. Walter A. Kochs, of Victor Chemical Works was the chairman, and his assistants were: F. K. Thayer, vice chairman, C. S. Curtis, C. Christensen, F. J. Heil, O. M. Krembs, L. S. Flanedy, W. P. Trebilcock, W. Kedzie Teller, A. G. Schneider, F. L. McCartney, and L. A. Lanigan. The souvenir, bags for this affair were large beyond all precedent, containing over two hundred articles and weighing sixty-five pounds apiece. The banquet having replaced the December luncheon, the next meeting of this association will be held on Thursday, January 26.

The banquets of both the Chicago Perfumery, Soap and Extract Association and the Chicago Drug and Chemical Association made the month of December an exceedingly active one, socially, for the members of the Chicago trade. The Perfumers' banquet was, as reported last month, unusually successful with an attend-

ance of 350. The souvenir bag for the ladies contained over fifty items. The firms whose contributions were received too late for mention in our last report were: Bristol-Myers Co., Aljo Press, Colgate-Palmolive-Peet Co., A. C. Drury & Co., Inc., Gordon Gordon Co., Johnson & Johnson, Justrite Paper Box Co., Luxor, Inc., Scovill Manufacturing Co., L. Sonneborn & Sons Co., Wertham Bag Corp., Walker Wynekoop Co., and Valentine Laboratories.

Soap Plant Employment Increased

Soap factories increased the number of their workers in November, but reduced slightly expenditures for wages, according to the Department of Labor. A like trend appeared in the industry making cottonseed oil, cake and meal. These changes were contrary to the general movement in employment from October to November, for a reduction of economic activity after the fall upturn naturally showed up in a loss of employment opportunities, the Department said. Earnings of industrial workers were also on the decline in industry as a whole in November.

Index numbers just compiled by the Department, using 1926 as 100, disclose employment in the soap industry advanced from 96.9 in October to 98.3 in the next month. Pay rolls, however, dropped from 84.4 to 83. Seventeen major industrial groups informed the Department of a 1 per cent drop in employment in November, along with a reduction of 3.1 per cent in wages.

Rapin Heads Antoine Chiris Co.

Louis Rapin has been named president and treasurer of Antoine Chiris Co., New York, succeeding Charles A. Swan who resigned December 31. Mr. Rapin has been connected with the Chiris organization for the past thirty years, and since 1924 has been actively associated with the American company. He has spent a portion of each year at the home office in Grasse, France, and is thoroughly conversant with the technical and manufacturing departments of the Chiris organization. William W. DeFrees, who since 1925 has been in charge of the Chicago office, has been made vice-president of the company, and George H. Mann has been appointed assistant manager.

Cleveland Container Co., Cleveland, manufacturer of paper boxes and containers, has moved its eastern branch office to 601 West 26th St., New York, where space has been taken on a ten year lease. The Hoboken factory will be discontinued and plant equipment moved at once to the new location.

The seal of approval of the American Dental Association has been denied to Strasska Laboratories, Los Angeles, makers of Dr. Strasska's tooth paste, because the company does not make public the composition of its product and because it is said to contain silica.

MUNN

NEWPORT

PALE WOOD ROSIN

YOU won't find any foreign matter in Munn. The way it's made precludes any possibility of THAT. Munn is certain to be 100% clean and uniform.

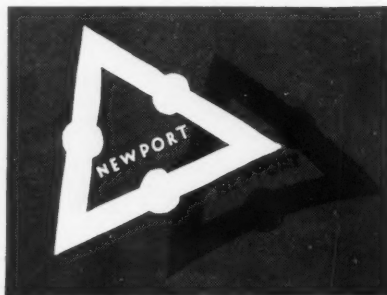
What two-point reason for Munn could be more compelling — especially where the soap manufacturer has stopped to figure the cost

and trouble involved with the use of inferior rosins.

Furthermore, the qualities of Munn are imparted to the soap. The soap is smooth, uniform and of precisely the color desired.

Try Munn and you'll SEE the difference.

GENERAL NAVAL STORES
CO. Inc. 75 E. 45th Street, N.Y.
Plants at: De Quincy, La.—Bay
Minnette, Ala.—Pensacola, Fla.



Say you saw it in SOAP!

Cleanliness Institute Suspends Work

The activities of *Cleanliness Institute*, subsidiary of the Association of American Soap & Glycerine Producers, Inc., New York, have been temporarily suspended owing to present economic conditions, according to an announcement by Roscoe C. Edlund, general manager of the Association and director of *Cleanliness Institute*. His announcement states in part:

"Cleanliness Institute has felt the force of the widespread economic situation. It is compelled to cut drastically the budget for its educational services in 1933. This decision taken December 14, required the immediate discontinuance of the staff heretofore associated with me in this work. Under these circumstances, the Institute cannot continue extensive correspondence, field service, and detailed assistance. These have already been discontinued. Correspondence should now be addressed either to the undersigned or to Cleanliness Institute.

To meet demands for Institute publications, including requests already on hand, the National Tuberculosis Association (450 Seventh Avenue, New York) has agreed to make available in each state, through its affiliated state and local associations, the educational materials created by Cleanliness Institute for public use. Transfer of Institute booklets, school readers, posters, etc., to these state associations, is now going on. This will require time, but will be completed in all states not later than February 25, 1933. Schools, health officials, writers, industrial executives, public health nurses, and others, may secure Cleanliness Institute materials from the Association in their own state."

An amendment to the Philippine independence bill recently passed by the U. S. Senate would reduce from 200,000 tons to 150,000 tons, annually, the amount of coconut oil which could be imported from the Philippines duty free. The amendment was sponsored by Senator Huey P. Long, Louisiana. In opposition to Senator Long's proposal it was pointed out that the Philippine copra mills have an annual capacity of 200,000 tons.

Gordon-Allen Ltd., Oakland, Cal., won a decision in a recent action against Par Soap Co., Federal Judge Kerrigan granting an injunction restraining J. Traeger from using the word "Par" on granulated soap or bar laundry soap or from operating under the name of Par Soap Co.

A pension plan has been put into effect by Unilever, Ltd., soap and margarin combine, which will benefit eleven thousand employees in the United Kingdom and Ireland. It will apply to all male works employees of twenty-one years and over, the company contributing two shillings per week for each employee, and the employee paying half this amount.

Deupree Again Heads Soap Assn.

R. R. Deupree, president of the Procter & Gamble Co., was re-elected president of the Association of American Soap and Glycerine Producers at the annual meeting, held at the Waldorf-Astoria Hotel, New York, De-



R. C. Edlund



R. R. Deupree

cember 14. Members heard the annual report of Roscoe C. Edlund, general manager of the association, and discussed problems of the soap industry and activities of the association. Other officers for the current year are: Charles S. Pearce, chairman of the board of Colgate-Palmolive-Peet Co., vice-president; Dr. J. S. Goldbaum, Fels & Co., secretary-treasurer; Nils S. Dahl, John T. Stanley Co., assistant treasurer; and the following directors, F. A. Countway, Lever Bros. Co., George A. Eastwood, Armour & Co., R. M. Johnston, Swift & Co., and F. H. Merrill, Los Angeles Soap Co.

Stockton Buzby Lauded by Colleagues

In a minute adopted by the members of the Association of American Soap & Glycerine Producers, Inc., at their annual meeting in New York last month, the late Stockton Buzby, former sales manager for Procter & Gamble Co., was lauded by his colleagues in the industry. The minute stated: "Stockton Buzby was from the beginning an active director of the Association of American Soap and Glycerine Producers, serving in recent years on both the Executive and Budget committee. His thoroughness and sound judgment was respected by his associates, and his sincerity and friendliness won our affection. To his entire work in the soap industry he brought outstanding qualities of character, ability, and experience. He was a tried and trusted friend, a good competitor, a capable and dependable associate. We are saddened by his loss, and our group will lose much by his absence."

A new wax polish called "No. 7 Duco-Wax" and a paste cleaner "No. 7 Pre-Wax Cleaner" have recently been introduced by E. I. du Pont de Nemours & Co., these being featured in an exhibit at the Joint Trade Show in Detroit.

COLUMBIA BRAND

98% - 100% CAUSTIC SODA

76% Na₂OSolid - Flake
Ground - Liquid

99% - 100% SODA ASH

58% Na₂OLight-Dense
Feather

THE COLUMBIA ALKALI CORPORATION

Executive Sales Offices, EMPIRE STATE BUILDING, NEW YORK CITY

Branch Sales Offices

431-451 St. Clair St., CHICAGO; Carew Tower, CINCINNATI; Santa Fe Terminal Bldg., DALLAS
BARBERTON, OHIO

CIN-MADE CONTAINERS

Makers of all kinds of insecticides, cleansers, soap powders, deodorants, paradichlorobenzene blocks and crystals, and many other similar products use CIN-MADE cylindrical fibre containers. From a wide variety of styles, sizes and colors there is a CIN-MADE container to meet your individual requirement. A large stock of all standard sizes is always carried in stock enabling us to offer 24 hours' service on rush orders. Prompt service on special sizes.

A FEW CIN-MADE STARS

1. Single holders for para blocks.
2. Special single holder with diamond cut holes and duo finish.
3. Multi-type container for para blocks.
4. Revolving nickeloid sifter cover.
5. Aluminum pour-out spout type.
6. Non-neck style—semi-perforated screw cap.
7. Tin slip-on cover—semi-perforated.

Samples and prices on request

THE CIN-MADE CORPORATION FORMERLY THE CINCINNATI MAILING DEVICE CO.
294 EGGLESTON AVENUE CINCINNATI, OHIO

Say you saw it in SOAP!

PERSONAL AND IMPERSONAL

Herman Force, head of the soap department and in charge of the New York and New Jersey country district for Armour & Co., died December 19 of a heart attack near his home in Hackensack, N. J. He was fifty years old and leaves a wife and two daughters.

Manhattan Soap Co., New York, has recently taken a new contract for a series of thirteen weekly broadcasts over the NBC radio network. Peck Advertising Agency, New York, is in charge of the soap company's radio advertising.

Billy B. Van, head of Pine Tree Products Co., Newport, N. H., has announced that coin machines are to be used in the distribution of "Pine Tree" soap, shaving cream, shampoo, etc. The company was previously represented by a sales agent, but has recently taken over distribution of its own products.

Flash Chemical Co., Cambridge, Mass., has advanced Emanuel Mensch to the position of sales manager of its industrial division. Offices will be opened at 1 Hudson Street, New York.

The Du Bois Company, Cincinnati, was one of the exhibitors at the recent Food, Cookery and Allied Trades Exposition sponsored by the Chicago Cuisine Association. In the DuBois exhibit "Lite-ning" dishwashing compound and "Neutraloid" floor cleanser were featured.

Lever Bros. Co. is offering dealers a reduction of 50c a case on "Lifebuoy" soap, provided sellers will maintain a price of 5c a cake, according to *The Grocers' Skirmisher*, Baltimore. This brings the dealer's cost down to \$4.82 a case. The offer is limited to ten cases per dealer.

Krank Co., Minneapolis, makers of shaving and face creams, have started manufacturing operations in Winnipeg for the Canadian market.

Day & Frick, Philadelphia, soap manufacturers, have appointed the Bloomingdale-Weiler Advertising Agency, of that city to handle their advertising. Newspapers will be used.

Barbasol Co., maker of "Barbasol" brushless shaving cream, is introducing a new cleansing cream under the "Barbasol" mark.

National Oil Products Co., Harrison, N. J., textile soaps and specialties, paid its regular semi-annual dividend of \$1 a share and an extra dividend of \$1 a share, January 1, to stockholders of record December 20.

Iowa Soap Co., Burlington, Iowa, has engaged McJunkin Advertising Co., Chicago, to handle advertising on its "Magic Washer" soap.

Cunningham Cleanser Corp., New York, moved to new and larger quarters at 113 East 138th St., December 29. The new telephone number is MOtt Haven 9-5070.

Fire which broke out in the home of William G. Mennen, toilet goods manufacturer, at Fair Haven, N. J., December 15, caused damage estimated at \$30,000. A Scotch terrier, whose barking aroused Mr. and Mrs. Mennen and three domestics, died in the blaze.

Teams representing E. R. Squibb & Sons and Carbide & Carbon Chemical Co. in the New York Wholesale Drug Trade Bowling Association were tied for first place in league standing on December 19th, each having won 21 games and lost 9.

Harold J. Egan has been named assistant sales manager of Coty, Inc., and John Bacher has been made Chicago district manager in two recent advancements.

Pittsburgh Cleanser Corporation has moved its offices to 350 W. 31st St., N. Y., and is now occupying approximately 8,000 square feet of floor space in the building at that address. The plant will be continued at 531 Flushing Ave., Brooklyn, N. Y.

Employees of Lever Bros. Co. have organized a league of twelve bowling teams who meet regularly on the alleys of the Commonwealth Recreation Club, Boston.

A reorganization of the entertainment committee of the Associated Manufacturers of Toilet Articles has been made necessary by the recent death of Frank J. Lynch. No new chairman will be elected, but the committee will function under the active direction of L. R. Root, Scovill Mfg. Co.

Oils used for soap manufacturing in Canada, during 1931 included 16,300,000 pounds of cocoanut oil, 8,600,000 pounds of palm oil, 3,600,000 pounds of soya bean oil and 1,300,000 pounds of peanut oil.

William J. Chapman, New Orleans, district sales manager for Colgate-Palmolive-Peet Co. until his retirement nine years ago, died recently in New Orleans at the age of 75. Mr. Chapman joined the Colgate Company almost fifty years ago and was stationed in Jersey City until transferred to New Orleans in 1904.

Cecil Smith, formerly vice-president and managing director of Yardley & Co., Union City, N. J., has been elected president of the company, succeeding John B. Niven who remains as secretary. Curtis Campaigne succeeds Mr. Smith as vice-president, and will continue to direct the sale of Yardley soaps and toilet preparations.

The Mysore Government Soap Factory, Bangalore, India, has recently issued an Album of Ancient Architecture in Mysore, it being the practice of the organization to issue annually a booklet dealing with some feature of the Mysore State. The Mysore Soap Factory is operated as a government monopoly and is the outstanding factor in the Indian domestic soap market.

Procter & Gamble Co. has issued a 20-page booklet describing "Gardinol WA Double Powder," a new sulfonated fatty alcohol product for textile detergent uses. The product is said to eliminate dinginess in textiles due to the presence of lime and magnesia soaps, free fatty acids, and unrinsed alkali. P. & G. are licensed to manufacture Gardinol in the United States under original patents of the Deutsche Hydrierwerke, now owned by the American Hyalsol Corp.

Monmouth Products Co., Cleveland, manufacturer of soap lather dispensers, is now located in new and enlarged quarters at 221 East 131st St., Cleveland, where the company occupies an entire large modern factory building.

A plant has been opened in Everett, Mass., by Mrs. Sonia Harrison, for the manufacture of shampoos, mouth washes, creams, etc. Mrs. Harrison was formerly associated with Boston Drug & Chemical Co., of which her husband is president.

Frederick C. Meisoll, cashier for Dodge & Olcott Co., New York, essential oils, died of pneumonia, December 21, at his home in Brooklyn. Mr. Meisoll had been with Dodge & Olcott Co. for forty-two years. He is survived by his wife and three children.

August Merz, Calco Chemical Co., was re-elected president of the Synthetic Organic Chemical Manufacturers Association at the recent annual meeting. Other officers were also re-elected as follows: vice-presidents, E. H. Kilheffer, E. I. du Pont de Nemours & Co., and F. G. Zinsser, Zinsser & Co.; members of board, G. Lee Camp,

Monsanto Chemical Works, Ralph E. Dorland, Dow Chemical Co., A. L. van Ameringen, van Ameringen-Haebler, Inc., and E. A. Barnett, John Campbell & Co.



B. J. Gogarty of the Rossville Commercial Alcohol Co., associated with the chemical, drug, and insecticide industries for the past twenty years, has been elected president of the Salesmen's Association of the American Chemical Industry for 1933.

The annual Christmas party of the Salesmen's Association of the American Chemical Industry was held at the Park Central Hotel, New York, December 29, with nearly two hundred members and guests in attendance. The entertainment committee composed of L. E. Swenson, American Cyanamid Co., chairman, Jack Leppart, Columbia Alkali Works, J. Alvarez, Grasselli Chemical Co., C. E. Kelly, Hagerty Bros., and Charles Lichtenberg, Commercial Solvents Corp., had arranged a program of entertainment which was put on following dinner. The installation of new officers was taken care of at a luncheon at the Chemists' Club that noon, the following being installed: B. J. Gogarty, Rossville Commercial Alcohol Corp., president; L. Neuberg, Warner Chemical Co., 1st vice-president; W. I. Galliher, Columbia Alkali Works, 2nd vice-president; L. E. Swenson, American Cyanamid Co., 3rd vice-president, and Frank Byrne, Monsanto Chemical Works, secretary-treasurer.

In an article in *Broadcast Advertising* by Professor Robert F. Elder, of M. I. T., the effect of radio advertising on sale of toilet soaps, toothpaste, scouring powders and shaving creams is analyzed as follows: per cent increase in use of radio-advertised brands in radio homes, toilet soaps, 8.3; toothpaste 45.1; scouring powders, 13.4; and shaving cream, 78.4; per cent decrease in use of non-radio-advertised brands in radio homes, toilet soaps, 12.9; toothpastes, 16.5; scouring powders, 16.1; and shaving cream, 10.6.

Billy B. Van, head of Pine Tree Products Co., Newport, N. H., was guest speaker at the Christmas party of the drug, chemical and allied trades section of the New York Board of Trade, held at the Hotel Astor, December 20. Percy C. Magnus, Magnus, Mabree & Reynard, Inc., presided and introduced Mr. Van. Victor E. Williams, Monsanto Chemical Works, acted as chairman of the entertainment committee. Dinner and a program of entertainment preceded Mr. Van's talk.

CONTRACTS AWARDED

Colgate-Palmolive-Peet Co., Berkeley, Cal., was recently awarded a contract for a quantity of chip soap for the U. S. Quartermaster at Fort Mason, Cal., at a price of 3.8c. Emeryville Chemical Co., San Francisco, awarded quantity of laundry soda at 1.84c.

Crystal Soap & Chemical Co., Philadelphia, has been awarded the contract for 650 lbs. soft soap for Chicago Quartermaster at 4.8c. Cohancus Mfg. Co., Paducah, Pa., awarded 10,000 cotton mops at 19.5c. Struck Equipment & Supply Co., Chicago, awarded 2,500 rattan brooms at 35.5c.

Crystal Soap & Chemical Co., Philadelphia, has been awarded the contract for 4,300 lbs. saddle soap for U. S. Marine Corps, Philadelphia, at a price of 7.8c.

Day & Frick, Philadelphia, have been awarded a contract for 3,000 cakes grit soap for Fort Sam Houston Quartermaster at a price of 3.25c. Armour & Co., San Antonio, awarded 50,040 lbs. laundry soap at 2.65c.; 2,520 lbs. at 2.95c.; 20,040 lbs. at 2.99c.; and 12,480 lbs. at 2.63c. Procter & Gamble Distributing Co., Dallas, awarded 13,260 lbs. laundry soap at 3.49c. Hunnewell Soap Co., Washington, awarded 10,000 cakes grit soap at 2.25c.

Innis Speiden & Co., New York, have been awarded a contract for 20,000 lbs. caustic soda for Bureau of Engraving and Printing, Washington, at a price of \$3.15 per 100 lbs., less 1%.

Barrett Co., New York, has been awarded the contract to supply 10,000 gallons of creosote oil to the U. S. Engineer, New Orleans, at a price of 11c a gallon.

H. H. Rosenthal Co., New York, was low bidder on 2,100 lbs. soda ash in a recent U. S. Marine Corps bidding with a quotation of 1.93c lb. Several bids of 16.5c lb. were entered on 200 lbs. anhydrous ammonia.

Innis-Speiden & Co., New York, entered the low bid on 20,000 lbs. caustic soda for the Bureau of Engraving & Printing, Washington, in a recent bidding, their quotation being 3.15c lb.

Unilever and Unilever N. V. in the last interim dividend statement reduced the rate of payment on their shares from 48 to 36 Dutch cents. Converted into British currency this equalled $4\frac{3}{8}\%$ on the British shares, as against 5% a year ago. Profits for the first quarter of 1932 were said to have been satisfactory but subsequent developments apparently made a cautious dividend policy advisable.

British soap manufacturers are reported to be having difficulty with illegal annexation of their package designs and trademarks by Japanese manufacturers, one of the latest complaints being registered by Cussons, Ltd., Manchester, England. Illiterate natives are said to have been easily deceived by imitation containers.

New York Soap Corp., New York, is introducing a new liquid shampoo concentrate under the name "Everfresh." The concentrate mixes with eight parts of water to form a shampoo. It is furnished in opal, mint, tar, lemon, pine and coconut oil, exclusively through supply dealers.

Indian Soap Imports Decreasing

A substantial decrease is noted in the amount of soap imported into India during the past fiscal year (April 1, 1931, to March 31, 1932.) as compared with the period 2 years earlier—a reduction of 15,473,000 pounds. This decline is attributed to the growing production of soap in India, which seems but natural since almost all of the ingredients used in the manufacture of this article are produced in the country. The following table will show the details of India's imports:

(Imports of Soap Into India)

	1929-30	1930-31	1931-32
Household and			
Laundry Cwts. . . .	383,656	287,127	265,655
Toilet Soap Cwts. . .	50,862	32,354	31,776
Other Kinds Cwts. . .	13,421	12,841	12,353
Total Cwts.	447,939	332,322	309,784

Of this amount, the United Kingdom supplied 393,629 cwts., 295,485 and 264,763 cwts. in each of the periods, respectively. During 1931 the United States shared in this market to the extent of 5,462 cwts., of which 5,001 cwts., was toilet soap. In this same period France sold 19,877 cwt. and Germany 3,154 cwt.

the modern shipping and pouring container for

IT'S The POR-PAIL—

A combination steel shipping and pouring container that is being widely used by manufacturers of soaps, sprays and sanitary products. It ships without boxing or crating, guarantees liquid-tight security at all times and gives your customer a more convenient and useful container. Pouring is very accurate, smooth and steady, entirely eliminating choking, gushing and dripping. When drained, cover is pried off so the empty pail may be used. Lithographed Por-Pails are distinctive, durable and will go far in definitely increasing your 1933 sales. Write us for details of our complete line of steel containers, or better yet, let us send you a lithographed container adaptable to your needs.

WILSON & BENNETT MFG. CO.

General Offices
6528 S. Menard Ave.
CHICAGO

Eastern Division
455 Third St.
Jersey City, N. J.

Southern Division
2126 Poland St.
New Orleans, La.

Steel Containers 1 to 65 Gallons

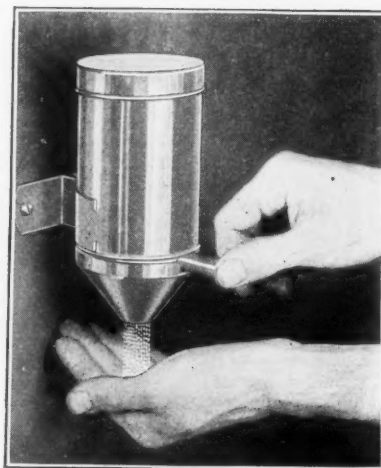


The new SUN DISPENSER for Powdered and Granular Soaps

THE SUN DISPENSER is a sturdy, all-metal dispenser for powdered and granular hand soaps. Simple, strong, fool-proof and economical. Will withstand all sorts of abuse. Attractive in appearance and lowest in cost. Available in dull cadmium finish, chromium plate, or sprayed in color as desired.

Write for samples and prices.

AUTO SUN PRODUCTS CO.
539 Poplar Street Cincinnati, O.



To encourage the use of your powdered soap or hand cleaner . . . as an advertising medium . . . we can emboss your name, seal, legend, etc. on the dispenser . . . to dispense and advertise your product . . . to sell, lend, or give to your customers . . . to help you sell more of your soap.

Say you saw it in SOAP!

RECORD OF TRADE-MARKS

The following trade-marks were published in the December issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

Trade Marks Filed

BOWL-LO—This in solid letters with drawing of toilet bowl, describing preparation for cleaning toilet bowls. Filed by Bowl-Lo Chemical Co., Canton, Ohio, Apr. 1, 1932. Claims use since Jan. 15, 1932.

WASH EASY—This in solid letters together with geometric design, describing washing fluid. Filed by Reliable Mfg. Co., Cleveland, Sept. 28, 1932. Claims use since Apr. 1, 1920.

BALLYHOO—This in outlined letters describing shaving cream. Filed by Gallaher Drug Co., Dayton, Oct. 21, 1932. Claims use since June 22, 1932.

MEX—This in script with drawing of Mexican girl, describing dentifrice. Filed by Master Laboratories Inc., Omaha, Apr. 13, 1932. Claims use since Sept. 1, 1931.

DY-SUDS—This in solid letters describing liquid dye-soap. Filed by A. C. Horn Co., L. I. City, N. Y., Oct. 12, 1932. Claims use since Mar. 1, 1932.

METRON—This in outline letters describing cleaning compound. Filed by Carman & Co., New York, Oct. 11, 1932. Claims use since Sept. 8, 1932.

RUN DIRT RUN—This in solid letters describing cleaning preparation. Filed by R. D. R. Mfg. Co., Maywood, Ill., July 29, 1932. Claims use since June 5, 1931.

CREAM AMMONIA—This in solid letters with word "Coopers" in oval shaped design, describing liquid ammonia cleaning compound. Filed by Chas. Cooper & Co., Newark, Aug. 20, 1932. Claims use since July 27, 1932.

VELVA BATH—This in solid letters describing liquid soaps. Filed by Elizabeth Arden, Inc., New York, Oct. 14, 1932. Claims use since 1923.

OLMINOL—This in tooled letters describing hand cleanser. Filed by Olminol North Arlington, N. J., Oct. 18, 1932. Claims use since July 5, 1932.

PEAGLER'S P. I. SPRAY—This in solid letters describ-

ing insecticide. Filed by Capital Chemical Drug Co., Montgomery, Ala., Sept. 13, 1932. Claims use since 1926.

CAVOSEPT—This in solid letters describing antiseptic. Filed by Cavendish Chemical Corp., New York, Sept. 17, 1932. Claims use since July, 1929.

LETH-O-GERM—This in solid letters describing antiseptic. Filed by Walker Corp. & Co., Syracuse, Sept. 24, 1932. Claims use since Aug. 31, 1932.

TWOCLAIMZ—This in solid letters describing tooth paste and antiseptic. Filed by Twoclaimz Mfg. Co., Providence, R. I., Oct. 4, 1932. Claims use since Sept. 15, 1932.

ELECTRIFIED CLEANSER—This in solid letters describing washing solution. Filed by Garber-Eagle Oil Corp., Brooklyn, Oct. 5, 1932. Claims use since January, 1931.

VAPORATOR—This in solid letters describing moth repellant. Filed by Odora Co., New York, Oct. 29, 1932. Claims use since Jan. 15, 1932.

U-CAM—This in outline letters describing disinfectant, antiseptic and deodorant. Filed by Ammonol Chemical Co., New York, Oct. 29, 1932. Claims use since Aug. 3, 1931.

ALCO SEAL—This in solid letters with seal describing cleaner. Filed by Alco Seal Co., Philadelphia, Aug. 22, 1932. Claims use since July 5, 1932.

ESAL—This in broken letters describing detergents. Filed by Cowles Detergent Co., Cleveland, Sept. 26, 1932. Claims use since Aug. 1, 1932.

GLIDER—This in solid letters describing shaving cream. Filed by J. B. Williams Co., Glastonbury, Conn., Oct. 10, 1932. Claims use since Aug. 18, 1932.

FRANK BAKER—This in script describing soap. Filed by Baker Manufacturer, San Francisco, Oct. 15, 1932. Claims use since May 1, 1932.

SILICA PRODUCTS—This in solid letters in diamond shaped design, describing soap. Filed by Silica Products Corp., New York, Oct. 27, 1932. Claims use since Sept. 6, 1932.

CHEROKEE—This in solid letters describing cleaning compound. Filed by J. B. Ford Co., Wyandotte, Mich., Oct. 28, 1932. Claims use since Nov. 1, 1929.

PINEGLOW—This in solid letters describing soap and shaving cream. Filed by Pineglow Products, New York, Nov. 3, 1932. Claims use since April, 1931.

ORADOL—This in solid letters describing antiseptic tablets. Filed by Pine Bros., Inc., Philadelphia, Sept. 24, 1932. Claims use since Aug. 26, 1932.

EXCELLO—This in solid letters describing deodorant germicide, antiseptic and cleaner. Filed by Excello Products Co., Buffalo, Oct. 28, 1932. Claims use since July 1, 1928.

Trade Marks Granted

299,447. Shampoo. American Advertised Products, Inc., Chicago. Filed July 28, 1932. Serial No. 329,127. Published September 13, 1932. Class 6.

299,474. Powdered Soap. Lockwood Brackett Co., Boston. Filed September 15, 1930. Serial No. 305,714. Published September 27, 1932. Class 4.

299,515. Cleaning Compound. Novo Mfg. Co., Modesto, Calif. Filed February 9, 1932. Serial No. 323,982. Published September 27, 1932. Class 4.

299,636. Concentrated Moth Proofing Solution. S. B. Penick & Company, New York. Filed July 23, 1932. Serial No. 329,025. Published September 27, 1932. Class 6.

299,639. Insecticides. Baird & McGuire, Inc., Holbrook, Mass. Filed July 21, 1932. Serial No. 329,009. Published September 27, 1932. Class 6.

299,647. Tooth Paste. Sabrol Laboratories, New York. Filed July 1, 1932. Serial No. 328,481. Published September 27, 1932. Class 6.

299,741. Hand Cleansing Preparation. Keystone Lubricating Co., Philadelphia. Filed July 30, 1932. Serial No. 329,236. Published October 4, 1932. Class 4.

299,742. Hand and Skin Cleaners. Marfred Laboratories, New York. Filed June 29, 1932. Serial No. 328,462. Published October 4, 1932. Class 4.

299,743. Soap. William Warren Taylor, Los Angeles. Filed June 15, 1932. Serial No. 328,022. Published October 11, 1932. Class 4.

299,745. Cleansing and Scouring Compound. Solvay Process Co., Geddes, N. Y. Filed March 31, 1932. Serial No. 325,697. Published June 14, 1932. Class 4.

299,746. Hand Soap, Powdered Soap, Etc. Atlas Supply Co., Newark. Filed March 9, 1932. Serial No. 324,941. Published October 4, 1932. Class 4.

299,770. Insecticides. Chase & Co., Sanford, Fla. Filed July 28, 1932. Serial No. 329,134. Published September 27, 1932. Class 6.

299,882. Compound for Cleaning and Polishing. William A. De Vries, Spokane, Wash. Filed August 12, 1932. Serial No. 329,516. Published October 11, 1932. Class 16.

299,883. Automobile and Furniture Polish. Vitro Shine Mfg. Co., St. Louis. Filed August 11, 1932. Serial No. 329,469. Published October 11, 1932. Class 16.

International Vegetable Oil Co., Greenville, Miss., suffered damage of \$75,000 in a fire which destroyed a large storage warehouse and 5,000 tons of cottonseed early last month.

The Case of Coconut Oil

(From Page 27)

which coconut oil melts and solidifies makes impossible any degree of creaming, thus precluding its use as a shortening, it has practically no shortening value. Some determinations have been made on the respective shortening values of different fats and oils, although nothing to my knowledge has yet been published, and the results show conclusively that there is no basis of comparison between coconut oil and these other fats and oils.

Using arbitrary comparisons in which lard is considered as having a shortening value of unity, or 100; the vegetable oils have approximate values of 90-92. Butter, corrected for its moisture content, has a shortening value of approximately 96. The hydrogenated shortenings have values between that of the unhydrogenated oils and butter. Contrasted with these high values coconut oil has a shortening value of only 40-42. You might be interested to know that some petroleum oils actually have shortening values higher than that of coconut oil.

If coconut oil has a shortening value of approximately 40 in comparison with these other fats and oils used principally for this purpose, it does not follow that by proportionately increasing the quantity of fat used in the dough mixture, the same shortening effect can be incorporated in the finished product. As you can well appreciate, there is a definite limit to the fat content which can be incorporated in the dough mixture, that limit being sufficiently low to preclude the possibility of ever using sufficient coconut oil to impart the necessary shortening effect.

There are some instances of coconut oil being used in the sense of a shortening, but in these particular cases it is used more for its lack of shortening quality than because it imparts shortening quality to the finished product. Certain types of fancy crackers and biscuits are produced in which a certain quality of richness is desired, but not the property of shortness or brittleness, as it might be called. At the same time there are certain types of crackers and biscuits manufactured for export to countries where climatic conditions are such that the normal shortening, like lard or vegetable compounds, would deteriorate very rapidly. Coconut oil completely lacking in shortening value, yet imparting a certain degree of richness and with the added advantage of better keeping qualities under unusual climatic conditions, enjoys some degree of usage in the biscuit and cracker industry for these rather unusual purposes and for which our domestic produced fats and oils are entirely unsuitable.

ONE very important use of coconut oil in the field of edible products is in the manufacture of oleomargarine. No other kind of vegetable oil produced in the United States seems to possess the necessary characteristics for margarine making; at least no manufacturer of oleomargarine has yet succeeded in produc-

ing a product made entirely from domestic vegetable oils which is acceptable to the American consumer. Because of its peculiar composition, coconut oil is particularly well adapted to the manufacture of a table fat for use as a spread for bread.

It seems to be impossible to produce the proper consistency which is essential in oleomargarine through hydrogenation of any of our vegetable oils. As you will see from the chart, they all contain appreciable percentages of oleic and linoleic acid and accordingly are liquid at very low temperatures. If they are hydrogenated to the point where the liquid portions are removed, the melting point of the oil is raised too high; in fact, to a point where the oil does not melt properly in the mouth and causes an unpleasant unpalatable greasy sensation on the tongue and to the roof of the mouth. If on the other hand, hydrogenation is stopped at a point where this greasy effect in the mouth will be eliminated, the oil will still be of too liquid a consistency to produce the proper texture margarine. Coconut oil, on the other hand, seems to possess just the proper fatty acids to impart the correct texture for this purpose.

Coconut oil enjoys many other specific uses in the cracker, biscuit and confectionery industries in addition to those specific uses in the production of fancy crackers and biscuits where it is employed in the sense of a partial shortening—or rather, because it will not impart any noticeable degree of shortening. In practically none of these places can any of our domestic fats and oils be substituted for it if a salable product is to be produced.

Unquestionably one very unique property of coconut oil has been responsible for the very high degree of popularity of the common sugar wafer and other equally as tasty sandwich types of cracker. The abnormally high latent heat of liquefaction of coconut oil, or the rapidity with which it goes from a solid fat to a liquid oil, produces unusually refreshing sensations in the mouth. Lacking any effect of greasiness, it imparts a particularly noticeable cooling effect, hence the refreshing taste of the sugar wafer and the sandwich form of crackers containing the coconut oil cream fillings and frostings.

Even if these products do not reach the ultimate consumer until many weeks after they have been baked, the coconut oil cream fillings do not become rancid, brittle, or unpalatable from the development of objectionable tastes characteristic of most of our domestic fats or oils when subjected to temperature conditions similar to those under which these products must be handled.

In general, in the field of edible fats and oils, cottonseed oil and our other domestic fats and oils possess characteristics which make them particularly suitable for use as shortening, vegetable lard, cooking and salad oils, etc. On the other hand, the very properties which make coconut oil unsuitable for use in these places,

(Turn to Page 51)

New Patents

Conducted by
Lancaster, Allwine & Rommel

Registered Attorneys

PATENT AND TRADE-MARK CAUSES

815 15th St., N. W., Washington, D. C.

Complete copies of any patents or trade-mark registrations reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine and Rommel. Any inquiries relating to Patent or Trade-Mark Law will also be freely answered by these attorneys.

No. 1,885,133, Detergent, Patented November 1, 1932, by William S. Oppenheimer, St. Petersburg, Fla. A detergent material comprising a pad of a plurality of layers of absorbent paper, and a mixture of fuller's earth and mineral spirits having the volatility and grease-solvent property of coal tar naphtha impregnating the paper pad, the quantity of the solvent being insufficient to saturate the pad.

No. 1,885,390, Cleaning Composition, Patented November 1, 1932, by Oscar Textor, Shaker Heights and Bert O. Crites, Cleveland, Ohio. A cleaning composition, which comprises finely divided sodium hydrogen sulphate about 25 per cent, and sodium sulphate about 75 per cent.

No. 1,885,905, Tri-Sodium Phosphate Hydrate-Soap Compositions, Patented November 1, 1932, by Frank L. Frost, Jr., East Cleveland, Ohio, assignor to The Grasselli Chemical Company, Cleveland, Ohio. A co-crystallized tri-sodium phosphate hydrate-soap composition, the crystals of which have a satin like sheen or luster.

No. 1,887,246, Process for Refining and Discoloring of Raw Sulphate Soft Soap, Patented November 8, 1932, by Evald Pyhala, Oulunkyla, Uusimaa, Finland, assignor to O. Y. Methods Ltd., Viipuri, Finland. A process for refining and discoloring of raw sulphate soft soap, comprising treating a solution of raw soap, or a solution of e.g., 50% strength, produced by redissolving of the raw soft soap, preferably in boiling condition with about 1/2% of peroxides, for instance hydrogen peroxide of 30% strength, calculated on the quantity of raw soap, mixing constantly and subsequently salting the reaction solution, tapping of the bottom water, washing of the soap with a small quantity of water, salting and then tapping the washing water from the separated soap refined and discolored.

No. 1,887,474, Process for Converting Liquid Soap Into a Rapidly Soluble Handy Form, Patented November 8, 1932, by Adolf Welter, Crefeld, Germany. A process for producing soap in the form of fine, rapidly soluble threads, consisting in atomizing molten soap

(Turn to Page 47)

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Market Report on ESSENTIAL OILS AND AROMATICS

(As of January 9, 1933)

NEW YORK—The market for perfuming materials continued to exhibit a downward trend this period, with movement of supplies light, due to seasonal influences, and price movements in many cases to lower levels. Suppliers are taking a slightly more optimistic tone as stocks in the hands of users are believed to be at a minimum, and some signs of the end of the downward movement in essential oil prices are apparent. Bergamot oil prices have been sharply reduced over recent weeks, leading to charges of sophistication in some quarters. Cananga oil and oil geranium have also been on the weak side, while citronella oil quotations have been firmer.

OIL ANISE

In spite of reduced demand for anise oil, due to seasonal influences, quotations have not changed over the past month, holding steady at 31c to 32c pound.

OIL BERGAMOT

The price of bergamot oil has been reduced sharply over the past month, with some sellers quoting as low as \$1.30 pound. Reports are current of sophistication of extremely low priced oil, and the general level of the market on the better brands is above \$1.50 pound.

OIL BOIS DE ROSE

Spot prices of this oil continue firm, due to shortage of supply both in the primary and domestic markets. The minimum quotation on Brazilian oil continues to be about 92c pound, with higher prices quoted.

OIL CITRONELLA

Citronella oil presents one of the few strong features of the market. With a short crop and small supply of oil, shippers show no tendency to reduce their demands and are waiting for the necessity of stock replacements to compel buyers to meet their figures.

OIL GERANIUM

Conflicting tendencies were noted in the geranium oil market. In some quarters concessions were made by sellers, while in others the market was reported firm on the basis of higher cables.

Imports of castile soap into United States during October, 1932, totaled 83,918 lbs., worth \$6,051, as compared with 368,288 lbs., valued at \$31,668, during the corresponding month of 1931. Imports of toilet soap totaled 69,372 lbs., worth \$16,649, in October, 1932, as compared with 190,435 lbs., valued at \$54,126, in October, 1931.

Canadian production of soaps, cleaning and washing compounds in 1931 had a total value of \$17,047,452, approximately \$1,000,000 less than in the previous year. Sixty-nine establishments were engaged in the manufacture of soaps and cleansers in Canada in 1931, their aggregate capitalization being \$15,322,398. Employees numbered 1,699, and salaries and wages totaled \$2,487,237. The major products of the industry were:—Household and laundry soaps, 58,088 tons, valued at \$7,462,274; toilet soaps, 13,624 tons, valued at \$4,509,052; soap powder, 7,648 tons, valued at \$1,179,739. Exports of soaps had a total value of \$727,828; imports were \$934,666.

New Patents

(From Page 45)

from liquid olive oil of 60 to 62% fatty acid content and in directing pressing the resulting dry soap particles into fine threads by extrusion through fin nozzles of 0.4 to 1.5 mm. diameter and passing air over the threads to make them brittle.

No. 1,887,743, Manufacture of Transparent or Opaque Toilet and Medicated Soaps, Patented November 15, 1932, by Paul Villain, Dulwich, London, England. The manufacture of solid perfumed toilet soap by incorporating, in the process of saponification of the fat constituent with alkali, a composition of aromatic odour comprising terpenes, resins and floral wax homogeneously emulsified with a suitable emulsifying agent.

No. 1,889,652, Process for the Distillation of Mixed Substances of Which Soap is a Constituent, Patented November 29, 1932, by Wilhelm Gensecke, Gonzenheim near Frankfurt-on-the-Main, Germany. In the refining of mixtures of neutral oils and free fatty acids by treating a solution of the oil in a solvent for oil which is a non-solvent for soaps with a neutralizing agent to convert the free fatty acid into soaps, separating the soaps from the solution of oil, and washing the soaps with the oil solvent until they are substantially free of neutral oil, the improved method of removing the oil solvent remaining in admixture with soap from the mixture which comprises converting the fatty acid soaps in the mixture into free fatty acids and thereafter removing the oil solvent from the mixture by distillation.

No. 1,889,658, Detergent, Patented November 29, 1932, by Charles Russell Hinchman, Haverford Township, Delaware County, Pa. A detergent composition comprising a homogenous mixture consisting approximately of soap, 20% to 25%, cocoanut oil, 1%; calcium carbonate (precipitated chalk), 25%; kieselguhr, 8%, and glycerine 40% to 45%, together with a small proportion of a flavoring ingredient.



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Market Report on SOAP AND DISINFECTANT CHEMICALS

(As of January 9, 1933)

NEW YORK—While there was some increase in activity among soapmakers early this month in replenishing low stocks of materials which had been carried over the inventory period, the movement in this direction was not as strong as it has been in previous years. Most buyers were anxious to get a better idea of what might be expected in the general business trend for the coming year before extending commitments, and continued to buy on a hand-to-mouth basis, taking care only of current needs. Prices were lower on some items, the darker grades of rosin and soaps lye glycerin being reduced by sellers.

ALKALIS

Deliveries of alkalis picked up somewhat during the first week of 1933 as some users found it necessary to replenish stocks which had been allowed to decline over the year-end period. In many cases shipments ran ahead of the same period in 1932, as a year ago users were holding substantial supplies of low cost alkali taken on their 1931 contracts. Although some difficulty has been encountered in closing 1933 contracts at the recent advance, it is reported authoritatively that alkali prices are firm at present levels.

GLYCERIN

Imports of foreign stocks of chemically pure glycerin have had a weakening effect on the local market recently, although quotations have not been reduced to meet the competition in many cases. Soaps lye glycerin was quoted lower this period, however, at 4c to 4½c lb. Imports of crude glycerin in November, 1932, were 620,284 lbs., worth \$20,330, imports of refined glycerin being 344,151 lbs., valued at \$19,504.

ROSIN

Variations in rosin prices were small over the recent period, and the market was quiet as is usual at this season of the year. Receipts continued light and it was reported from stock points that arrivals so far this season have run some 300,000 barrels lower than the total for last season. Stocks at the close of the fiscal year were reported to be 150,000 barrels lower than they were on January 1, 1932. The closing schedule this month follows: Grade B, gum rosin, \$2.85; H, \$3.85; K, \$4.35; N, \$5.05; WG, \$5.70; WW, \$6.35; wood \$3.43 to \$3.63.

The Perkin medal of the Society of Chemical Industry was this year presented to George Oenslager of the B. F. Goodrich Co. Presentation was made at a meeting held January 6 in the Grand Central Palace, New York.

First Bulk Palm Oil to Canada

Palm oil in bulk is being shipped next month from the West Coast of Africa to Halifax, this consignment being the first bulk shipment ever made direct to Canada. The oil, which will be transported in special tanks by the S.S. *West Keybar*, is destined for Toronto, where it is to be used in the manufacture of soap and other products. Although the movement may not be attributable directly to the successful results achieved at the Imperial Conference, it is maintained that the interest aroused by the deliberations at Ottawa on trade and commerce was responsible for this initial direct shipment from Nigeria to Nova Scotia.

Polishes for Metal Surfaces

(From Page 31)


solution; (Brit. 307,141) pastes or aqueous solutions of complex sulfonic acids and their salts with niter cake or other inorganic acid cleaner; (Can. 279,500) phosphoric acid, a chromium compound and methyl ethyl ketone; and (Jap. 32,462) 8.5 per cent ferrous sulfate, 1 per cent oxalic acid, 1.6 per cent tartaric acid, 0.5 per cent aluminum sulfate and 88.4 per cent water. Others are (Swedish 54,257) alcohol, turpentine, oil and sulfuric acid and (Can. 305,576) phosphoric acid, alcohol, butyl alcohol, water and starch.

Zinc, tin or aluminum (Fr. 699,195) is cleaned with phosphoric acid or an acid salt of that acid to which aluminum sulfate is added. Guns (Can. 282,110) are cleaned with 81.5 per cent mineral oil, 15 grams alcoholic oleic acid and 3.5 grams ethyl lactate.

The latest development in polishing powders is a material which on simple mixing with water gives a liquid water base metal polish of a stability comparable with the usual liquid products. The cost of tin containers for shipping water is a considerable item of saving and alone justifies the product.

Probably some materials that might be used are not mentioned in the literature quoted. If not, they are either included in the patents not quoted or will be patented at some not remote date by a hopeful inventor.

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Market Report on TALLOW, GREASES AND OILS

(As of January 9, 1933)

NEW YORK—The market for soapmaking fats, oils and greases continued to exhibit a downward trend this period, bringing prices of many items down to a level only fractionally above the lows reached early this summer. The situation is somewhat more encouraging to producers now, however, as production of fats and oils has been reduced materially this year, and stocks are now estimated to be at least twenty-five percent under the figures for the first month of 1932. Among the products to decline in price this period were tallow, grease and palm oil, while coconut oil and cottonseed oil were unchanged.

COCONUT OIL

Little activity was noted in the market for coconut oil this period, offerings being limited and demand quiet. Prices were unchanged, coast tanks bringing 3c lb. At present levels, both tallow and palm oil are more favorably priced than coconut oil for consumption by the soap industry.

COTTONSEED OIL

The market for cottonseed oil was a quiet affair last period, the volume of transactions being seasonally low and prices moving within narrow limits. Early in the period the trend was downward but later a more optimistic tone developed due to the moderate rise in securities and other commodities. At the close PSY oil was quoted at 3½c lb., last period's close.

GREASES

House, yellow and white grease were lower in price this period, as demand slackened seasonally, and competing materials moved to lower levels.

PALM OIL

Palm oil quotations were reduced a quarter-cent a pound this period in the absence of demand, Lagos now being quoted at 3c lb.

TALLOW

Tallow quotations moved lower this period, city extra being quoted at 2¼c lb. At this figure buyers showed more interest, chiefly for small quantities, however. Offerings were light at the reduced price and the market steady.

Hammond Paint & Chemical Co., Beacon, N. Y., is introducing a new gardeners insecticide unit for control of various insects and plant diseases.

The Case of Coconut Oil

(From Page 45)

where our domestic fats and oils find their principal outlets, make it particularly adapted for use in places where our domestic fats and oils, especially the vegetable oils, give very unsatisfactory results. For these clear-cut distinctions no explanation is possible, except that by some caprice of nature the constituents of coconut oil have been blended in such a manner as to endow it with its very peculiar characteristics.

Thorough appreciation of the fundamental differences between coconut oil and the fats and oils of American agriculture is only possible after one has a complete knowledge of the compositions of the respective fats and oils, and with this knowledge it is indeed difficult to see how there is any degree of competition between coconut oil and the other fats and oils in the edible group.

Before leaving the subject of coconut oil's place in the edible field, it would be interesting to consider briefly some of the more important economic aspects. Our domestic fat and oil production goes largely into the manufacture of edible products, while our imports go principally into the manufacture of industrial products, particularly soap, since the United States has a large deficiency of edible fats and oils, as borne out by government statistics. On the basis of the Bureau of the Census figures released for the calendar year 1931, 72.2% of the total domestic oil and fat consumption is in food channels; only 19.8% in a multiplicity of varieties of soap; 5.2% in the drying oil field, and 2.6% in miscellaneous manufactured products such as tinplate, lubricating grease, and other industrial products.

With respect to the importance of coconut oil, by far the greater portion of it goes into the manufacture of industrial products, primarily soaps, which outlet accounts for approximately 63-65% of the total imports. The Bureau of the Census statistics reveal a certain small quantity of coconut oil which went into compounds and vegetable shortening, but the quantity constitutes less than 6/10ths of 1% of the total edible consumption of oils and fats in this country. Although I cannot state positively, it is my belief that the greater part of this coconut oil did not, in fact, go into products where it would compete with lard compound, but instead was used in the cracker and biscuit industry because, as I have already pointed out, of its lack of

(Turn to Page 57)

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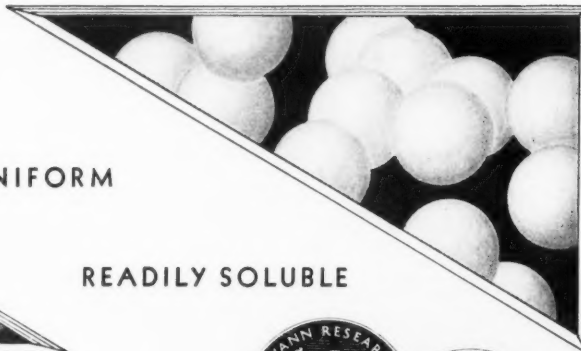
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CURRENT PRICE QUOTATIONS

As of January 9, 1933

Minimum Prices are for car lots and large quantities. Price range represents variation in quotations from different suppliers and for varying quantities.

Chemicals

Acetone, C. P., drums.....lb.	.10	.11
Acid, Boric, bbls., 99½%.....ton	95.00	100.00
Cresylic, 97% dk., drums.....gal.	.42	.43
97-99%, pale, drums.....gal.	.49	.53
Formic, 90%, tech.....lb.	.10½	.12
Oxalic, bbls.....lb.	.11	.11½
Adeps Lanae, hydrous, bbls.....lb.	.14	.15
Anhydrous, bbls.....lb.	.15	.16
Alcohol, Ethyl, U. S. P., bbls.....gal.	2.45	2.59
Complete Denat., No. 5, drums, ex. gal.	.35½	.43½
Alum. potash lump.....lb.	.03	.03½
Ammonia Water, 26°, drums, wks.....lb.	.02½	.02¾
Ammonium Carbonate, tech., bbls.....lb.	.08	.12½
Bleaching Powder, drums.....100 lb.	1.75	2.35
Borax, pd., cryst., bbls., kegs.....ton	50.00	55.00
Carbon Tetrachloride, car lots.....lb.	—	.06½
L. C. L.....lb.	.06½	.07
Caustic, see Soda Caustic, Potash Caustic		
China Clay, filler.....ton	10.00	25.00
Cresol, U. S. P., drums.....lb.	.10½	.11
Creosote Oil tanks.....gal.	.11½	.12½
Formaldehyde, bbls.....lb.	.06	.07
Fullers Earth.....ton	15.00	24.00
Glycerine, C. P., drums.....lb.	.10¼	.10½
Dynamite, drums.....lb.	.07½	.08½
Saponification, tanks.....lb.	.05	.05½
Soaps, Lye, tanks.....lb.	.04	.04½
Hexalin, drums.....lb.	—	.30
Kieselguhr, bags.....ton	—	35.00
Lanolin, see Adeps Lanae.		
Lime, live, bbls.....per bbl.	1.70	2.20
Mercury Bichloride, kegs.....lb.	.93	1.08
Naphthalene, ref. flakes, bbls.....lb.	.03¾	.05
Nitrobenzene (Myrbane) drums.....lb.	.09½	.11
Paradichlorobenzene, bbls., kegs.....lb.	.15	.23
Paraformaldehyde, kegs.....lb.	.38	.39
Petrolatum, bbls. (as to color).....lb.	.01¾	.06¾
Phenol, (Carbolic Acid), drums.....lb.	.14¼	.16
Pine Oil, bbls.....lb.	.61	.66
Potash, Caustic, drums.....lb.	.06½	.06¾
Flake.....lb.	.07	.08
Potassium Bichromate, casks.....lb.	.08	.08½
Pumice Stone, powd.....100 lb.	2.50	4.00
Rosins (600 lb. bbls. gross for net)——		
Grade B to H, basis 280 lbs.....bbl.	2.85	3.85
Grade K to N.....bbl.	4.35	5.05
Grade WG and WW.....bbl.	5.70	6.35
Wood.....bbl.	3.43	3.63
Rotten Stone, pwd. bbls.....lb.	.02½	.04½
Silica, Ref., floated.....ton	18.00	22.00
Soap, Mottled 40 lb. box.....lb.	—	.12
Olive Castile, bars, powder.....lb.	.12	.22
Powdered White, U. S. P.....lb.	.14	.16
Green, U. S. P.....lb.	.06½	.07½
Tallow Chips.....lb.	.07½	.08
Whale Oil, bbls.....lb.	.04	.04½
Soda Ash, contract, wks., bags, bbls. 100 lb.	1.17½	1.43
Car lots, in bulk.....lb.	—	1.05
Soda Caustic, Cont., wks., sld.....100 lb.	—	2.55
Flake.....lb.	—	2.95
Liquid, tanks.....lb.	2.15	2.20
Soda Sal., bbls.....100 lb.	1.05	1.15
Sodium Chloride (Salt).....ton	11.40	14.00
Sodium Fluoride, bbls.....lb.	.07½	.08½

Sodium Hydrosulphite, bbls.....lb.	.22	.26
Sodium Silicate, 40 deg., drum, 100 lb.	.75	.80
Drums, 60 deg. wks.....100 lb.	—	1.65
In tanks, 15c. less per hundred, wks.		
Tar Acid Oils, 15-25%.....gal.	.21	.25
Trisodium Phosphate, bags, bbls.....lb.	.03	.0390
Zinc Oxide, lead free.....lb.	.06	.06¼
Zinc Stearate, bbls.....lb.	.16	.18

Oils—Fats—Greases

Castor, No. 1, bbls.....lb.	.09	.10
No. 3, bbls.....lb.	.08¾	.09½
Coconut		
Ceylon, Coast Tanks.....lb.	.02¾	.03
Cochin, barrels, N. Y.....lb.	.04½	.04¾
Manila, tanks, N. Y.....lb.	.03¾	.03¼
Tanks, Pacific Coast.....lb.	.02¾	.03
Cod, Newfoundland, bbls.....gal.	.22	.24
Copra, bulk, Coast.....lb.	.0170	.0180
Corn, tanks, mills.....lb.	.02¾	.03
Bbls., N. Y.....lb.	.05¼	.05½
Cottonseed, crude, tanks, mill.....lb.	.02¾	.02¾
PSY.....lb.	—	.03½
Degras, Amer., bbls.....lb.	.02½	.03¾
English, bbls.....lb.	.03¾	.03¾
German, bbls.....lb.	.02¾	.03¾
Neutral, bbls.....lb.	.06½	.08½
Greases, choice white, bbls., N. Y.....lb.	.02¼	.03¼
Yellow.....lb.	.02	.02½
House.....lb.	.02	.02¾
Lard, prime, steam, tierces.....lb.	.04½	.04¾
Compound tierces.....lb.	.05¾	.06
Lard Oil,		
Extra, bbls.....lb.	—	.07
Extra, No. 1, bbls.....lb.	—	.06½
No. 2, bbls.....lb.	—	.06
Linseed, raw, bbls., spot.....lb.	.0740	.0780
Tanks, raw.....lb.	—	.0680
Boiled, 5 bbls. lots.....lb.	—	.0860
Menhaden, Crude, tanks, Balt.....gal.	—	.10
Oleo Oil, No. 1, bbls., N. Y.....lb.	—	.06
No. 2, bbls., N. Y.....lb.	—	.05½
Olive, denatured, bbls., N. Y.....gal.	.54	.56
Foots, bbls., N. Y.....lb.	.04¾	.04½
Palm, Lagos, casks, spot.....lb.	.03	.03½
Shipments.....lb.	.02¾	.03
Niger casks, spot.....lb.	.02¾	.02¾
Shipments.....lb.	—	.02½
Palm Kernel, casks, denatured.....lb.	.04¼	Nom.
Tank cars, denatured.....lb.	—	.03½
Peanut, domestic tanks.....lb.	.03	Nom.
Red Oil, distilled, bbls.....lb.	.06¼	.06¾
Saponified, bbls.....lb.	.06¾	.06¾
Tanks.....lb.	—	.05¼
Soya Bean, domestic tanks, N. Y.....lb.	—	.03½
Stearic Acid		
Double pressed.....lb.	.08	.08½
Triple pressed, bgs.....lb.	.10¾	.11¼
Stearine, oleo, bbls.....lb.	.03¾	.04
Tallow, special, f. o. b. plant.....lb.	.02½	.02¼
City, ex. loose, f. o. b. plant.....lb.	.02¼	.02½
Tallow, oils, acidless, tanks, N. Y.....lb.	—	.05½
Bbls., c/1, N. Y.....lb.	—	.06
Whale, nat. winter, bbls., N. Y.....gal.	.51	.53
Blchd., winter, bbls., N. Y.....gal.	.54	.55
Extra blchd., bbls., N. Y.....gal.	.57	.58

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Soya Bean Oil
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Denatured)

Rapeseed Oil
(Undenatured)
Castor Oil
Sesame Oil
Lard Oil
Palm Oil
Corn Oil
Peanut Oil
Grease (Animal)

Tallow
Red Oil
Soap Colors
Chlorophyll
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Almond, Bitter, U. S. P.....lb.	\$2.25	\$2.50
Bitter, F. F. P. A.....lb.	2.50	2.75
Sweet, cans.....lb.	.38	.40
Apricot, Kernel, cans.....lb.	.22	.24
Anise, cans.....lb.	—	—
U. S. P., cans.....lb.	.32	.33
Bay, tins.....	1.60	1.90
Bergamot, coppers.....lb.	1.50	2.00
Artificial.....lb.	1.35	1.50
Birch Tar, rect., bot.....lb.	.45	.50
Crude, tins.....lb.	.13	.14
Bois de Rose, Brazilian.....lb.	.92	1.00
Cayenne.....lb.	2.00	2.10
Cade, cans.....lb.	.26	.27
Cajuput, native, tins.....lb.	.52	.54
Calamus, bot.....lb.	2.75	3.00
Camphor, Sassy, drums.....lb.	.11	.12
White, drums.....e.lb.	.11	.12
Cananga, native, tins.....lb.	1.70	1.80
Rectified, tins.....lb.	2.20	2.30
Caraway Seed.....lb.	1.45	1.55
Cassia, Redistilled, U. S. P.....lb.	.82	.85
drums.....lb.	—	.80
Cedar Leaf, tins.....lb.	.60	.65
Cedar Wood, light, drums.....lb.	.26	.28
Citronella, Java, drums.....lb.	.49	.50
Citronella, Ceylon, drums.....lb.	.35	.36
Cloves, U. S. P., cans.....lb.	.75	.90
Eucalyptus, Austl., U. S. P., cans.....lb.	.24	.26
Fennel, U. S. P., tins.....lb.	1.00	1.10
Geranium, African, cans.....lb.	4.20	4.60
Bourbon, tins.....lb.	4.10	4.50
Hemlock, tins.....lb.	.70	.75
Lavender, U. S. P., tins.....lb.	1.85	3.50
Spike, Spanish, cans.....lb.	.55	.75
Lemon, Ital., U. S. P.....	.75	1.00
Lemongrass, native, cans.....lb.	.42	.44
Linaloe, Mex., cases.....lb.	1.25	1.35
Neroli, Artificial.....lb.	10.00	20.00
Nutmeg, U. S. P., tins.....lb.	.90	.95
Orange, Sweet, W. Ind., tins.....lb.	1.10	1.25
Italian cop.....lb.	1.10	1.70
Distilled.....lb.	.50	.55
Origanum, cans, tech.....lb.	.25	.40
Patchouli.....lb.	3.25	4.50
Pennyroyal, dom.....lb.	1.70	1.80
Imported.....lb.	1.10	1.25
Peppermint, nat. cases.....lb.	1.70	1.80
Redis., U. S. P., cases.....lb.	1.90	2.05
Petit Grain, S. A., tins.....lb.	.90	.95
Pine Needle, Siberian.....lb.	.60	.63
Rose, Natural.....oz.	6.00	15.00
Artificial.....oz.	2.00	2.75
Rosemary, U. S. P., tins.....lb.	.27	.30
Tech., lb. tins.....lb.	.23	.27
Sandalwood, E. Ind., U. S. P.....lb.	6.00	7.00
Sassafras, U. S. P.....lb.	.70	.80
Artificial.....lb.	.16	.18
Spearmint, U. S. P.....lb.	.95	1.00
Thyme, red, U. S. P.....lb.	.50	.65
White, U. S. P.....lb.	.60	.70
Vetivert, Bourbon.....lb.	4.50	5.00
Java.....lb.	16.00	20.00
Ylang Ylang, Bourbon.....lb.	4.00	6.00

Aromatic Chemicals

Acetophenone, C. P.....lb.	\$1.75	\$2.25
Amyl Cinnamic Aldehyde.....lb.	3.50	4.25
Anethol.....lb.	1.00	1.10
Benzaldehyde, tech.....lb.	.60	.65
U. S. P.....lb.	1.20	1.35
Benzyl, Acetate.....lb.	.60	.95
Alcohol.....lb.	.80	1.30
Citral.....lb.	2.10	2.40
Citronellal.....lb.	1.75	2.50
Citronellol.....lb.	2.50	3.50
Citronellyl Acetate.....lb.	4.50	7.00
Coumarin.....lb.	3.60	4.00
Cymene, drums.....gal.	.90	1.25
Diphenyl oxide.....lb.	1.10	1.20
Eucalyptol, U. S. P.....lb.	.60	.70
Eugenol, U. S. P.....lb.	2.25	3.00
Geraniol, Domestic.....lb.	1.45	2.00
Imported.....lb.	2.00	3.25
Geranyl Acetate.....lb.	2.50	4.00
Heliotropin, dom.....lb.	2.00	2.50
Imported.....lb.	2.50	4.00
Hydroxycitronellal.....lb.	3.50	9.00
Indol, C. P.....oz.	2.50	5.00
Ionone.....lb.	3.75	6.50
Iso-Eugenol.....lb.	3.50	5.00
Linalool.....lb.	1.95	3.25
Linalyl Acetate.....lb.	2.40	3.15
Menthhol.....lb.	3.35	3.50
Methyl Acetophenone.....lb.	2.50	3.00
Anthranilate.....lb.	2.20	2.60
Paracresol.....lb.	4.50	6.00
Salicylate, U. S. P.....lb.	.40	.45
Musk Ambrette.....lb.	6.75	7.25
Ketone.....lb.	6.00	7.50
Moskene.....lb.	5.40	5.90
Xylene.....lb.	2.75	3.00
Phenylacetaldehyde.....lb.	4.75	7.25
Phenylacetic Acid, 1 lb., bot.....lb.	3.00	4.00
Phenylethyl Alcohol, 1 lb. bot.....lb.	4.25	4.50
Rhodinol.....lb.	6.00	9.50
Safrol.....lb.	.20	.22
Terpineol, C. P., 1,000 lb. drs.....lb.	.28	.30
Cans.....lb.	.33	.34
Terpinyl Acetate, 25 lb. cans.....lb.	.80	.95
Thymol, U. S. P.....lb.	1.50	1.75
Vanillin, U. S. P.....lb.	4.50	5.75
Yara Yara.....lb.	1.60	3.00
Insect powder, bbls.....lb.	.17	.21
Concentrated Extract		
5 to 1.....gal.	1.30	1.60
15 to 1.....gal.	3.35	3.75
20 to 1.....gal.	5.20	5.40
30 to 1.....gal.	7.25	7.50
Gums—		
Arabic, Amb. Sts.....lb.	.06	.06½
White, powdered.....lb.	.09	.10
Karaya, powdered No. 1.....lb.	.09	.10
Tragacanth, Aleppo, No. 1.....lb.	.70	.75
Sorts.....lb.	.07	.08
Waxes—		
Bayberry, bgs.....lb.	.16	.18
Bees, white.....lb.	.30	.33
African, bgs.....lb.	.13	.14
Refined, yel.....lb.	.20	.30
Candelilla, bgs.....lb.	.11	.12
Carnauba, No. 1.....lb.	.22	.23
No. 2, Yel.....lb.	.21	.22
No. 3, Chalky.....lb.	.11½	.12
Japan, cases.....lb.	.06	.06½
Paraffin, ref. 125-130.....lb.	.03%	.04½

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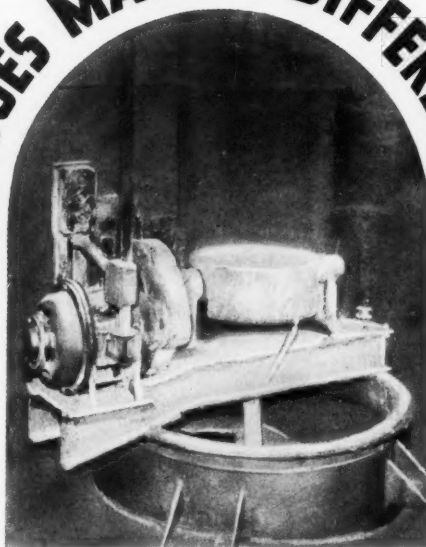
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The Case of Coconut Oil

(From Page 51)

shortening value. At the same time a portion of it was undoubtedly used in the manufacture of oleomargarine, which was described as shortening previous to the effective date of the Brigham bill of June 2, 1931. Before this date it could be legally sold as lard substitute or shortening to escape the oleomargarine tax of 10c per pound applicable to colored oleomargarine, provided the product did not contain milk solids (and it was accordingly reported to the Bureau of the Census as such).

The scientific facts show why coconut oil cannot compete in any sense of the word with cottonseed oil or other domestic produced vegetable oils. The economic facts show conclusively that it does not offer any degree of competition. I have just stated that the United States produces principally fats and oils of edible grade, only a relatively small percentage of them finding their way into the manufacture of industrial products. But the production of our edible fats greatly exceeds our domestic consumption so that close to a billion pounds of first class edible fats and oils must be exported annually.

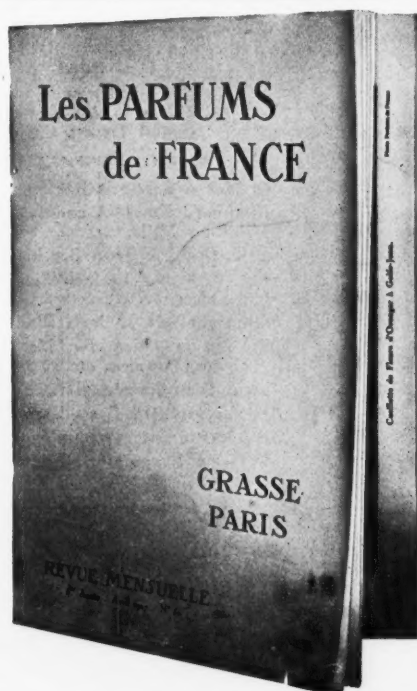
Since certain interests now demand among other things, immediate independence for the Philippine Islands in order that more and still higher tariff duties may be levied against imported oils, and particularly coconut oil, on the assumption that the cottonseed oil industry may have still greater protection, it is a fitting question to ask why we did not go on a permanently

higher scale of cottonseed oil prices after the last tariff revision. The real competition of cottonseed oil is with lard as these two products are used almost exclusively for the same purposes, excepting a certain small proportion of the cottonseed oil production which finds its way into the preparation of salad oils and similar preparations for which lard is obviously not adapted.

During the year 1931 we had exports of approximately 701,000,000 pounds of lard, to which must be added approximately 100,000,000 pounds of quasi inedible lard, which we term white grease, but which European countries import and refine to sell under the appellation of "Dutch" lard. The total exports then of edible and quasi edible hog fats alone approximate 800,000,000 pounds. Is it not clear to everyone then, that the price of lard must be set in the European market and this world price of lard, therefore, is the determining factor which sets the price of cottonseed oil? Even if a tariff of 10c a pound were placed on coconut oil to preclude the 6/10ths of 1 per cent of edible oil consumption which it displaced in the field of shortening, what effect would it have on raising the price of cottonseed oil?

The proponents of this tariff advance the contention that if our imported vegetable oils were shut out, there would be no exportation of lard. From this it is evident that either the edible lard or the edible cottonseed oil must be forced into industrial usage, the only conceivable outlet being the soap kettle. A consideration of the scientific aspects of these fats and oils will reveal the

(Turn to Page 107)



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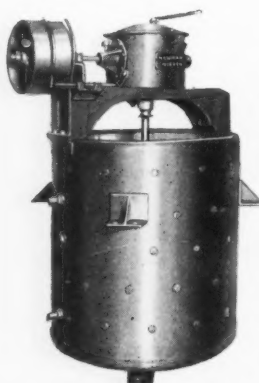
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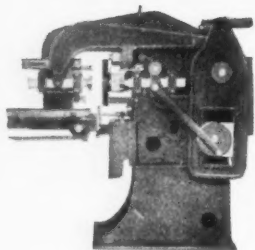
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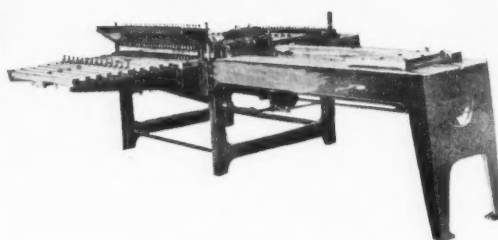


Here are illustrations of two of Newman's brand new all steel, steam jacketed SOAP CRUTCHERS. The CRUTCHER on the left can be used to crutch ANY kind of soap. The CRUTCHER on the right can also be used to crutch any kind of soap but is especially adapted for Crutching laundry soap. These are made in a complete range of sizes. Investigate our equipment and prices before placing your next crutcher order.

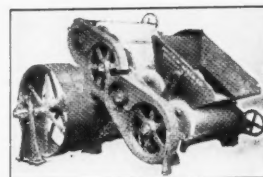


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This 4-roll granite toilet soap mill is in A-1 shape. Latest and largest size rolls.

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H-A 1500, 3000, 4000, 5000 lbs. capacity. Steam Jacketed Crutchers.
Dopp Steam Jacketed Crutchers, 1000, 1200, 1500 lbs. and 800 gals. capacity.
Ralston Automatic Soap Presses.
Scouring Soap Presses.
Empire State, Dopp & Crosby Foot Presses.
2, 3, 4, 5 and 6 roll Granite Toilet Soap Mills.
H-A 4 and 5 roll Steel Mills.
H-A Automatic and Hand-Power slabbers.

USED EQUIPMENT

Sperry Cast Iron Square Filter Presses, 10, 12, 18, 24, 30 and 36 inch.
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Proctor & Schwartz Bar Soap Dryers.
Blanchard No. 10-A and No. 14 Soap Powder Mills.
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PRODUCTION SECTION

A section of SOAP devoted to the technology of oils, fats, and soaps. published prior to Jan. 1, 1932, as a separate magazine under the title, *Oil & Fat Industries*

Requirements of Dry Cleaning Soaps

DRY cleaning soaps must meet certain practical requirements, but these requirements have not been as accurately defined as might be desired. Hence, there has been a difference in opinion between the maker of the soap and the user regarding its proper composition and its required action. The matter of determining these requirements is naturally within the province of the user of the soap, that is the dry cleaning industry.

An association of dry cleaners and dyers in England, the National Federation of Dyers and Cleaners, undertook two years ago a series of experiments to study the conditions governing the use of dry cleaning soaps in practical operation and to determine the requirements which they must meet. The findings were recently published in the *Journal of the Society of Dyers and Colourists* and are of considerable interest and importance to every manufacturer of dry cleaning soaps. They stated in part:

"Our experiments* have been directed towards establishing the constitution and mode of application of a soap having the maximum cleansing effect when used in the machine. In some cases there may, of course, be special reasons for departing from a formula found to be generally satisfactory; when, e.g., some particular system of clarification or filtration is employed the exact degree of solubility of the soap may be a matter of great importance. In my own work the precaution has been taken that the soap used shall be readily and completely soluble in the solvent employed, but the problem of the soap remaining in the used solvent is a matter to which reference is made later.

Before commencing the dry-cleaning experiments deci-

sions had to be made regarding— (1) The choice of apparatus representing practical conditions; (2) the proportion of material to solvent; (3) the selection of suitable textile materials; (4) the production of a standard soiled fabric for the cleaning experiments.

Apparatus

A tumbler or shaker such as is used for tanning and dyeing experiments in leather laboratories appeared to be indicated; the actual apparatus used consisted of a wooden casing divided into 12 felt-lined compartments (two rows of six), each containing a wide-mouthed bottle of 600 c.c. capacity. The bottles are provided with corks and leather washers; when the lid of the casing is shut and clamped down, the bottles are held tightly closed. The whole casing is revolved on a horizontal axis at 60 revs. per min. by a ¼-h.p. motor, and as each bottle contains 100-200 c.c. of liquid the contents are subjected to a thorough shaking.

The criticism has recently been made, and with some justice, that with a smooth glass vessel and a single piece of material there is insufficient friction to bring about the loosening of dirt which occurs in practice; it is therefore possible that the apparatus may be modified to remedy this.

The larger proportion of solvent to material and consequent greater freedom of movement as compared with practice may to some extent compensate for the absence of frictional surface. To imitate works conditions, which, however, differ widely, would involve taking 30-40 g. of fabric per l. of solvent. To ensure thorough agitation in the bottles and even cleaning not more than 200 c.c. of solvent, and in the case of wool not more than 2.5 g. of material, can be used.

The woollen fabric, selected after many failures, is a fairly thick all-wool flannel of good color and weighing

* Cf. E.P. 289,582 (Hatfield, Allott & Achille Serre Ltd.), described fully by Farrell and Walker (*ibid.*), and the work of C. L. Bird (*Jour. Soc. Dyers & Colourists*, 1931, 47, 254; 1932, 48, 30).

7 oz. to the yard. For silk trials a weighted crêpe-de-chine has proved satisfactory and can be evenly soiled without difficulty. Cotton is a more troublesome problem; most suitable materials contain too much dressing and hence are resistant to liquids in the cold. Open material, such as that used for strip bandages, is excellent, but does not represent the practical problem. Cotton cloth used in dyeing laboratories allows fairly good soiling and resembles many lining materials met with in the works. Viscose and Celanese materials are being tested, but a selection has not yet been made.

Preparation of Soiled Material

The method used by the British Laundry Research Association for the soiling of cotton cloth in a reproducible manner is described by Dr. R. G. Parker in *Control of Laundry Operations*. He points out that any method used must fulfill the following conditions—(1) The dirt should be similar to that present on naturally soiled goods. (2) The color of the goods must be an indication of the quantity of dirt present. (3) The method of applying the dirt must give reproducible results.

For soiling, we employed at first Acheson graphite in its two forms of "Aquadag," a suspension in distilled water, and "Oildag," a suspension in oil.

We found, however, that on woolen material more level and consistent results were obtained by soiling the material in the shaker just described than by drawing it through the liquid in a shallow tray as recommended by Dr. Parker. For some time we employed a mixture of very finely powdered slate dust and Aquadag in suspension in white spirit,* this would roughly represent a combination of dust from roads, etc., and carbon from the air in the form of smoke and smuts. 25 g. Flannel were shaken for ¼ hr. in 200 c.c. of white spirit containing 0.5 g. of slate and 3.75 c.c. of 0.4% suspension of Aquadag and passed through squeezing rollers. This represents, of course, a non-greasy dirt. For a greasy dirt Oildag alone was used.

The earlier experiments were carried out with these soiling substances, but the method was later improved and simplified by omitting the non-greasy dirt and adopting a standard soiling method with a mixture of carbon and oil. It may be assumed that the majority of fabrics sent for dry-cleaning contain a certain amount of grease which acts as binding medium between dirt and material, and that the use of a greasy, but not too greasy dirt, would most nearly represent the average practical problem; non-greasy dirt is more the concern of a laundry or wet-cleaning process. "Oildag" was abandoned, since the oil it contains is of mineral origin, and various animal and vegetable oils and greases were compared. A very finely divided carbon mixed with oleic acid gives extremely level soiling, but it was thought that the substance used should be a glyceride rather than a fatty acid, and after trials with a final selection comprising lanolin, olive oil, margarine, and lard, in

which olive oil or lard gave the most even result, olive oil was decided on as easier to obtain in standard quality.

The flannel patterns were thenceforth soiled by tumbling for ½ hr. with 0.2 g. carbon and 1 g. olive oil in 200 c.c. white spirit. The carbon is fine "Bonnite" carbon, passing through a 200 mesh. The cotton material is soiled in a similar way, but requires five times as much carbon and olive oil to give a suitable shade of grey. For silk, only 1 g. of material is taken and the weights of carbon and olive oil are twice those used for wool.

In the case of woolen patterns the actual average amount of soiling present on the fabric was determined and found to be—Carbon 0.037 g. or 1.48%, oil 0.047 g. or 1.68% on weight of wool. After rinsing for ¼ hr. in white spirit,* carbon and oil are present on the material in approximately half the original amounts. The color, however, does not indicate a 50% loss and it would appear that the carbon is brought more to the surface by the partial extraction of the oil.

Having found out how to dirty a fabric, we now at last began to clean it. It was necessary first of all to make an approximate determination of the proportion of soap to use. Samples of 18 proprietary "Dry Cleaning Soaps" had been received from various makers and four of these which found special favor with cleaning firms whom we consulted, were taken. Soiled woolen patterns were tumbled for ½ hr. in 200 c.c. white spirit* alone, and with the addition of amounts of each soap varying from 0.1 to 1.0 g. The results indicated generally that white spirit* alone reduces the depth of surface color by 20-30%; with the addition of 0.25 g. soap there is a slight increase in the cleansing effect, and with 0.5 g. considerably more. With 0.75 g. a deterioration was observed, and with 1.0 g. the result was barely equal to that obtained with the solvent alone. This was rather a startling result and was at first hotly contested by a cleaner of high attainments who had "never known goods to be made worse by using too much soap." The tests were repeated several times with similar results and it may be concluded that although the quantitative effect of excess varies according to the nature of the soap, it is never advisable and usually distinctly injurious to add more than 1 lb. of soap to 40 gals. solvent. The figure certainly holds good for most concentrated commercial soaps, or for a soap made in the works with a minimum amount of liquid solvent.

With this ratio established, we compared the 18 proprietary soaps using 0.25, 0.5, and 1.0 g. of each. The soaps varied in appearance at ordinary temperature from a clear brown liquid to a pale creamy semi-solid. Only one was entirely free from traces of water. Three of the 18 were found to be ammonia soaps containing traces of potash, 11 were potash soaps, the remaining four mixed potash and ammonia soaps. Three or four soaps stood out as distinctly better than the rest and our results agreed fairly closely with the practical experience

* The term "white spirit" refers to turpentine substitutes.

of several firms. The above comparison was undertaken at this early stage of the work in order to give some guidance for the purchase of "benzine soaps"; after this, the experiments were continued with soaps of known composition.

The method of preparing these has been referred to already; a solution of caustic potash in denatured alcohol is stirred into the liquid fatty acid. As a rule heating is unnecessary as sufficient heat is developed in the reaction to maintain the fluid state.

Four soaps were prepared from commercially pure oleic acid. These contained respectively 50, 30, and 10% of unsaponified fatty acid, the fourth being exactly neutralized. Trials with all these soaps confirmed the previous finding that excess is harmful, this effect being most marked where the percentage of free oleic acid is highest. The difference in cleaning effect between Nos. 2, 3, and 4 is not great, but the average over a number of trials indicated No. 3 (10% free acid) as the best, and this soap (Lab. Soap No. 3) has been adopted as a standard.

Variations of many kinds in the cleaning treatment were tried. The results may be summarized briefly:

Effect of Time—With a single treatment with white spirit and soap, the maximum effect is produced in 20-30 min.; beyond this there is very little change.

Temperature—The cleaning effect increases with rise in temperature from 10° C. to about 30° C.; with further rise it diminishes rapidly. The optimum temperature is that of a very warm summer day.

Presence of Moisture—Water may be present either (1) in the cleaning solvent, (2) in the goods, (3) in the "benzine soap." It was considered axiomatic that the spirit itself should be free from moisture and a single trial confirmed this, incomplete and uneven cleaning results from the addition of very small proportions of water (1:200). In other experiments, increasing amounts of distilled water were added (a) by incorporation into the soap, (b) by moistening the fabric. The effect of drying the material completely before cleaning was also included in these trials.

It is found in all cases, contrary to statements often made, that drying beforehand does not assist cleaning; the dried wool comes out with an inferior color and frequently with an unpleasing yellowish tint. On the other hand, the presence of water in a proportion greater than 1:400 tends to diminish the cleaning effect. A general conclusion is that the moisture naturally in the goods as received, with possibly a slight addition from the soap, represents the most favorable condition.

The addition of denatured alcohol in proportions over 1:200 is also detrimental and confirms Farrell's observation that, for making up weaker soap solutions for works use, cleaning spirit and not denatured alcohol should be the diluent.

The effect was tested of substituting various qualities of commercial "Olein" for the oleic acid in preparing the potash soaps. A comparison was made of 14 olein samples varying in color, consistency, and price. Those

which remain liquid at the laboratory temperature consist of more or less pure oleic acid, while those which partly or wholly solidify contain an admixture of stearic and palmitic acids. Bird (*loc. cit.*) reports the inferior solubility in cleaning solvent of soaps made from the acids of higher melting points. His findings will have considerable bearing on our future experiments, but we find that, at the concentration employed, viz. 1:400, the solubility of soaps made from any commercial oleins which contain an appreciable percentage of oleic acid, suffices to permit their use. The opinion, often expressed, that only such oleins as remain completely liquid at all ordinary temperatures yield satisfactory soaps, is not confirmed by these experiments. Excellent soaps resulted from the use of a moderately priced pale olein, semi-solid in the cold, of which 100 parts required 20.3 parts caustic potash for complete saponification. The difference between soaps made from the various oleins, with the exception of one or two obviously inferior qualities, was not great, but for works purposes a standard brand known to be of constant composition and quality should be adopted.

Since it did not appear immediately possible to improve upon Lab. Soap No. 3, the addition to the solvent, or incorporation in the soap, of various substances recommended as useful was tried. Chief among these are the cyclohexanol compounds, including methylcyclohexanol. These have proved their great value as solvents in other directions, notably that of cellulose lacquers, and they are ingredients of certain dry-cleaning soaps. We have tried them in various proportions and combinations with and without soap, but up to the present the results obtained fail to justify the cost of their inclusion. It is possible that their emulsifying action may result in a loosening or solvent effect on some classes of stains not reached by the ordinary white spirit and soap bath, but this point and in general the effect of additions to the solvent on a wide variety of stains, is a subject for future investigation. The only class of substances definitely proved of value includes proprietary articles containing pine oil, which do appear to attack certain obstinate stains when used in small proportion along with the soap. Even when used alone in white spirit they exercise a cleansing effect which, however, is not as great as that of a soap, such as No. 3.

Ammonia Soaps

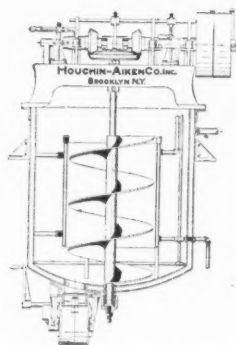
On this subject there may be conflict between our laboratory results and works experience. It is still the practice in some works to prepare a dry-cleaning soap with the aid of ammonia and in one instance the soap is produced in the washing drum itself by throwing in a pailful of liquid olein, followed in due course by the addition of ammonia until a "nice lather" is formed. This somewhat rough and ready method, although possibly effective in the hands of an experienced workman, is at the best wasteful, and is attended with risks to the colors of dyed and printed materials.

(Turn to Page 65)

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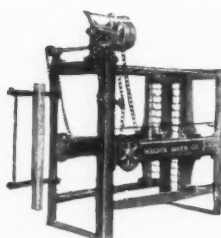
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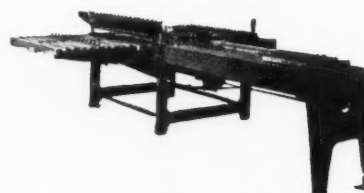
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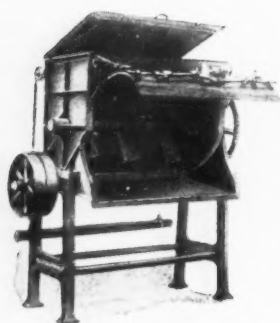
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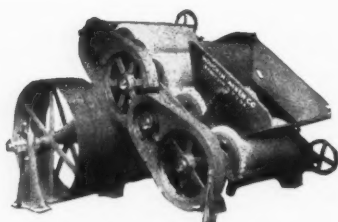
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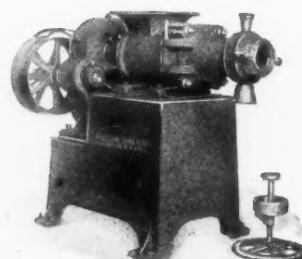
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Fractional saponification of fats is used to detect the presence of vegetable oils in lard. From the saturation equivalent are calculated the molecular weights of the insoluble, non-volatile fatty acids liberated from the saponified and unsaponified glycerides, and the difference of the values is taken. The difference is as high as 60 in the presence of adulterants. The presence of coconut oil can be substantiated by taking the difference of the iodine coefficients determined on the insoluble non-volatile acids, which are obtained from the saponified and unsaponified fractions.—E. de Conno and L. Finelli. *Annali Chim. Applicata*, 1932, volume 22, pages 407 to 416.

Determinations of pH were carried out on two soaps, a synthetic washing compound and sodium carbonate, phenolphthalein and alizarin yellow R being used as indicators at 25 and 65 degrees C. Commercial conditions were simulated by varying the concentration of the soap and the quantity of sodium carbonate added. The percentage of sodium carbonate present controls the pH value of the soap solutions, and the hydrolyzing action of the soap has little effect. The harmful action of soaps, which contain sodium carbonate, on wool was determined by washing wool, drying, storage for four weeks and then testing for damaged fibers. No injury resulted from using normal soap-soda concentrations and temperatures. However, increased temperature or increased time of exposure caused fiber deteriorations. J. Stockhausen and E. Kessler. *Seifensieder Zeitung*, volume 59, 1932, pages 539 to 540 and 558 to 560.

Soap powders contain alkali perborate and a small percentage of a salt of magnesium having no reducing action on the perborate. Suitable salts are the sulfate, chloride, and nitrate in a proportion equivalent to 0.1 to 0.3 per cent of magnesium oxide. In an example, a solution of one pound of crystallized magnesium sulfate in a small quantity of water, ten pounds of 75 degree Tw. sodium silicate, and 22.5 pounds of anhydrous sodium carbonate are well mixed into 50 pounds of soap in a pasty or molten condition. When the temperature is below 50 degrees C, 9.5 pounds of sodium perborate are added, and the mixture is reduced to powder.—Lever Brothers Ltd., British Patent No. 378,973.

Soft soaps are made from fatty oils, such as soya bean, linseed or peanut oils, which are saponified under super-atmospheric pressure and at a temperature above 100 degrees C with a mixed caustic potash-soda lye, in which

the proportion of caustic potash to soda does not exceed 90:10. Alkali metal salts are added to the saponification mixture in the proportion of two to six per cent. Salts, such as sodium or potassium chloride, carbonate, or sulfate, or their solutions, are added either to the raw materials or preferably to the saponified mixture, whereby a salve-like consistency is imparted to the soft soap.—F. W. Leffer, London, England. British Patent No. 378,913.

Soaps of great wetting and emulsifying power are obtained by sulfonating spermaceti or spermaceti oil with 30 per cent or more of sulfuric acid and heating the product with excess of alkali. Ordinary soaps and other substances may be added. For example a liquid toilet soap is obtained by mixing three pounds of 2:2-pentamethylene-4-oxymethyl-dihydroxydioxol, thirty pounds of 20 per cent spermaceti soap and 100 pounds of a 20 per cent soap made from oleic acid and coconut oil. Deutsche Hydrierwerke A. G., Charlottenburg-Berlin, Germany. British Patent No. 377,536.

The nickel catalyst, which is used for the hydrogenation of oils, fats and waxes, is alloyed with a non-catalytic metal, such as aluminum. The alloy is then treated with sodium hydroxide in amount insufficient to remove all the aluminum. The product is then washed and treated with hydrogen at elevated temperature and pressure. It forms a superior catalyst for hydrogenation operations.—Murray Raney. French Patent No. 729,357.

A simple and rapid method for the analysis of commercial oleins and stearins is described as regards their content of oxy-acids. The determination of the acetyl index in castor oil is also discussed. It is also applied to degreas. The proportion of oxy-acids in oleins and stearins is determined by first establishing the acid number and the saponification number by saturation or saponification by means of standardized alkaline solutions in the presence of alcohol. The oxyhydrides are determined by dissolving the sample in xylene, adding acetic anhydride and fused sodium acetate. This gives the acetyl number.—Angel Pascal. *Bulletin des Matieres Grasses*, volume 16, 1932, pages 298 to 300.

Fatty acids, such as oleic acid or those derived from copra, castor, olive, peanut or palm oil, are treated with solutions of alkali metal or ammonium sulfite or hydro-sulfite to yield sparingly soluble compounds which on

subsequent treatment with caustic alkali, or alkali metal or ammonium carbonates yield soluble crystalline substances suitable as detergents. The detergent may be obtained directly by acting upon fatty acids with the two reagents in admixture. R. Vidal, Seine, France. British Patent No. 379,438.

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Cleansing agents, not attacking aluminum, tin, or their alloys, are obtained by dissolving water-insoluble silica in a solution or melt of trisodium phosphate, and drying or solidifying the product, preferably by atomization to obtain it finely divided. Quartz, kieselguhr, and silicic acid gel are specified forms of silica. In an example, 1000 kilograms of trisodium phosphate are melted in its water of crystallization, and 100 kilograms of quartz or kieselguhr are dissolved therein with stirring. The product is atomized.—Chemische Fabrik Budenheim A. G., Mainz, Germany. British Patent No. 379,152.

Middle Soap

Middle soap is one of the most important forms of the soap-water-electrolyte system on account of its relation to the practical problems involved in producing soap on an industrial scale. A study has been made of the fields of stability of middle soap in systems made up of tallow or coconut oil soaps in the presence of water and sodium chloride. Evidence is also shown to establish the validity of the assumption that the mixed soaps of tallow and coconut oil behave essentially as a single soap in the presence of water and electrolyte over the ranges of concentration involving middle soap at the temperature of the soap kettle, 100 degrees C.

The authors show how to arrive at the correct relation of middle soap to the pitching process as water is added to the soap system by determining the total composition of the kettle of soap at the pitching stage in terms of soap, water and electrolyte and by plotting this composition on an appropriate diagram and drawing a straight line from this point to the origin of the diagram. Attention is also paid to the effect of variations in the compositions of the tallow or coconut oil, from which the soap is made, on the equilibria studied, for example that between nigre and neat soap.

The experiments were carried out on various mixtures of soap, sodium chloride and water, the soap being made in anhydrous, electrolyte-free form by a special method. The results of the experiments left no doubt that middle soap exists in commercial soap systems as a distinctive phase which may coexist with neat soap, with nigre, or with both. Its appearance at 100 degrees C is that of a plastic transparent liquid, dark colored in soap systems derived from such fats as tallow, but of very light color in the coconut soap system. It is a typical example of the liquid crystalline solution state of matter, since it can vary widely in composition and yet retain the characteristics of a liquid crystal. Between crossed nicols, middle soap exhibits beautiful polarization colors and

superficially, shows an even more highly developed structure than neat soap.

Neat soap in the coconut oil soap-sodium chloride-water system at 1000 degrees C is stable over a greater range of sodium chloride content than in the case of tallow soap. This is very important in the production of soaps which are to be subsequently milled, where the presence of electrolyte has a pronounced effect on the stability of the finished bar. Middle soap is more of a problem in coconut oil than in tallow soap, and hence the greatest care must always be exercised in attempting to pitch a pure, sodium-coconut oil soap. In the case of mixtures of tallow and coconut oil soaps, sodium chloride and water at 100 degrees C, middle soap becomes more prominent as the percentage of coconut oil soap increases. These results are not directly concerned with the actual formation of neat soap in the kettle, but they throw some light on the problems of blending stocks to produce a soap of desirable characteristics of soap content and other properties. The behavior of soap made from different stocks appears to be predictable from the known effect of electrolyte on the soaps made from the single stocks. R. H. Ferguson and A. S. Richardson, *Industrial and Engineering Chemistry*, 1932, volume 24, pages 1329 to 1335.

Preservatives in Soap

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The preservative used in a high grade soap must meet the following requirements: it must not change the color or odor of the soap and must not react with iron oxide always present in soap. It must not make the soap hard and brittle. It must not impair the lathering quality; it must be neither volatile nor poisonous. It must not react with the fatty acids or alkali; it must be soluble in the fat or lye. It must be sufficiently effective in small quantities and it should not cost more than the soap. A number of preservatives, commonly used for this purpose, are listed. The effectiveness of the preservative was tested by keeping samples cut from the cakes at room temperature away from light while others were exposed to light. The ultra-violet lamp was also employed. It was found that two per cent of anhydrous sodium sulfite, three per cent of crystallized borax, 3.3 per cent of crystallized sodium thiosulfate and 2.5 per cent of sodium benzoate on the weight of the soap are effective preservatives.—Oskar Hagen. *The Soap Trade and Perfumery Review*, 1932, volume 5, 1932, pages 105 to 106.

Bleaching Soap

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Potassium persulfate is used in bleaching soap, the proportion varying from 0.2 to one part per 100 parts of soap. Too much persulfate must not be used, as it later yellows the soap. Bleaching in stages is recommended. For example when a soap is made from stock containing bone fat and dark peanut oil, the latter is first saponified and the soap is bleached before the bone fat is added. Then the soap made from the bone fat

is bleached. Palm oil soaps do not actually require bleaching. The soap should be preferably slightly alkaline when using persulfate bleach. The latter should be added to the soap at as low a temperature as possible; always below 80 degrees C. The evolution of active oxygen from the bleach must not be too rapid as otherwise the efficiency of the process is low. Zinc oxide may be added in the proportion of 0.1 part per 100 parts of soap. It eliminates the last traces of oxygen in the soap after bleaching. It may be added in aqueous dilution either simultaneously or after the addition of persulfate.—Anon. *Ind. Sapon.*, volume 37, page 28.

—o—

Three states repealed oleomargarine tax laws at the recent election, the laws repealed being a tax of 15c per pound in Colorado, a tax of 10c per pound in Oregon and a dealers' license law in Michigan. Laws in Oklahoma and South Dakota, imposing taxes of 10c per pound, were sustained.

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Dry Cleaning Soaps

(From Page 61)

A long series of experiments was made to determine the best proportions of olein and alkali for the preparation of an ammonia soap. The theoretical proportions for complete saponification are 51 parts ammonia (880) to 282 parts oleic acid by weight, or approximately 2:11. A soap made with these proportions dissolves only with difficulty in turpentine substitute, and even a soap from 3 parts ammonia and 20 parts oleic acid is not very readily soluble. This difficulty may be removed by preparing the soap beforehand as a solution in cleaning solvent, dissolving the olein in the solvent and adding the ammonia with constant stirring. Solvents of the aromatic series, e.g., benzol and solvent naphtha, occasionally used in place of turpentine substitute, have a better solvent action on ammonia soaps than turpentine substitute, and in these solvents ammonia soaps possibly show to better advantage.

In general the results obtained with ammonia soaps compared very unfavorably with those with potash soaps. Commercial ammonia soaps usually contain a small proportion of potash and our trials show that a mixed soap is better than an ammonia soap, but not as good as a pure potash soap. The proportion of ammonia soap required to give the same effect is 4-5 times as great as that of a potash soap made from the same weight of oleic acid. In some cases the additional cost may be justified, but this has yet to be proved; if ammonia soap is employed, the proportion 3 parts ammonia to 20 parts olein should be taken and a stock solution prepared with solvent naphtha.

The addition of ammonia to the solvent, apart from its presence in the soap, has also been recommended. When using Lab. Soap No. 3, even the addition of 0.5 c.c. liquid ammonia to the solvent resulted in a marked

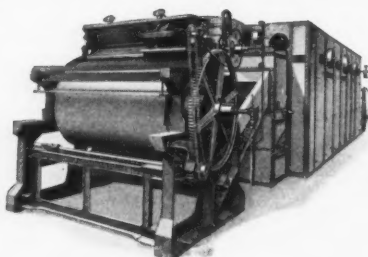
deterioration in the color, and larger additions prevented any cleaning action; these bad results could not be wholly accounted for by the added water. With certain proprietary soaps a very small addition of ammonia is not without good effect, but these soaps are such as contain a high proportion of unsaponified acid and are merely brought into the optimum condition of neutralization.

In another class of soaps of recent introduction the saponifying alkali is replaced by triethanolamine $(\text{CH}_2\text{OH-CH}_2)_3\text{N}$, a compound which with free fatty acids forms neutral soaps, soluble both in water and in cleaning spirit. The representatives of the manufacturers of triethanolamine supplied a formula of American origin; in addition to this were tried two other soaps, one a simple mixture in molecular proportions, and one with excess of oleic acid. The American soap, which contains several ingredients (some of doubtful action on cellulose acetate rayon), is a clear yellow liquid miscible with cleaning spirit and gives a result little inferior to Lab. Soap No. 3; the cost, however, is considerably higher. The soap made in molecular proportions is of the consistency of vaseline and dissolves readily in turpentine substitute, but is inferior in cleaning power; a soap containing even a moderate excess of oleic acid dissolves with considerable difficulty and has no cleaning effect. These results did not offer sufficient encouragement to proceed with the triethanolamine soaps.

Proprietary soaps recommended for use with the non-inflammable solvents, carbon tetrachloride and trichloroethylene, have recently been placed on the market. These appear to contain triethanolamine and it is suggested that soaps of this kind have less adverse effect on the stability of the solvent than the ordinary dry-cleaning soaps.

At this stage it appears useful to summarize our conclusions. When cleaning *woolen* materials with turpentine substitute as the solvent—(1) The goods should not be completely dried before cleaning, or if dried should be allowed to regain their natural moisture. (2) The proportion of soap to be added is approximately 1:400. Excess may diminish the cleaning effect. (3) With this proportion of soap the maximum cleaning effect is produced in 20-30 min. and at 25°-30° C. (4) The best soap is a potash soap in which 5-10% of fatty acid is unsaponified. (5) The addition of ammonia in the machine is not advisable and ammonia soaps are less effective than potash soaps. (6) Triethanolamine soaps are not at present a practical proposition under usual cleaning conditions. (7) Additions, such as cyclohexanol, are unnecessary and uneconomical, but a pine oil compound may be useful.

Our trials on materials other than wool have not yet proceeded very far, but some work has been done on cotton and on weighted silk, and the soiling methods for these fibres have already been mentioned. The general results agree very closely indeed with those on wool; from the surface nature of the fabrics it is less easy to detect minor differences in the grey tint, and this applies



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Managing Director

The extra attention given to the needs of guests will favorably impress you. Nearest to stores, offices, theatres and railroad stations. A special floor is reserved for ladies. Each guest room is outside with bath, circulating ice water, bed-head reading lamp and Servidor. Housekeeper on each floor. Garage facilities.

2500 ROOMS \$3.00 UP

MORRISON HOTEL

Madison and Clark Streets

CHICAGO

Say you saw it in SOAP!

also to viscose and acetate silk as well as to the others.

Variations in the Solvent

The laboratory was consulted a few months ago on the relative value of cleaning solvent with a higher or lower boiling range, and a series of trials in this direction was combined with an inquiry whether the method of using soap should be varied with different solvents. Owing to the recent revival of interest in the non-inflammable solvents, especially trichloroethylene and carbon tetrachloride, these were included. A systematic range of trials was carried out with six solvents on wool, silk, and cotton, with and without the addition of soap. The results on all three fibres are similar and general conclusions can be drawn. The six solvents compared were:

"Benzine" or light spirit	b.p. range	75°-150° C.
"Mex rubber solvent"	"	108°-150° C.
Turpentine substitute	"	150°-175° C.
Solvent naphtha	"	110°-170° C.
Trichloroethylene	b.p. 88° C.	
Carbon tetrachloride	" 77° C.	

One series was treated in solvent only for $\frac{1}{4}$ hr. and a second series for $\frac{1}{2}$ hr. When treated for the shorter period solvent naphtha shows the greatest effect, followed in order by trichloroethylene, carbon tetrachloride, light spirit, rubber solvent and turpentine substitute. If cleaning is continued for $\frac{1}{2}$ hr., turpentine substitute has risen to third place, being superior to carbon tetrachloride, rubber solvent and light spirit. It is evident that the lower boiling fractions of petroleum spirit have a more rapid solvent action than the higher. When soap is present, the same order of excellence is shown, except that at $\frac{1}{2}$ hr. carbon tetrachloride has descended to the bottom of the list. In every case the cleaning is much greater when soap is present, and the fact that the non-inflammable solvents need the addition of soap to produce their full effect has been repeatedly confirmed.

In a further range of experiments made by way of recapitulation and confirmation, variations were made (a) in the solvent, using the three petroleum spirit solvents and solvent naphtha, (b) in the time of treatment, and (c) in the additions which were (1) Lab. Soap No. 3, (2) a semi-solid proprietary soap called for convenience "S," which occupied a high place in the previous trials, and (3) a pine oil product. The last named was found as before to be of little value by itself. The only new feature of interest arising from the results is that soap "S," which has approximately the same soap strength, is considerably slower in action than Lab. Soap No. 3. With 10 min. running, Soap No. 3 is distinctly better, at 20-30 min. the results are alike, but at 60 min. soap "S" shows a slight superiority. The result cannot be accounted for by the slight difference in the proportion of free fatty acid and may be due to the fact that Lab. Soap No. 3 was freshly made, while the soap "S" had been in the laboratory for some months. Possibly on long standing a change occurs which retards dissociation.

In the course of our work a number of points have

arisen which bear more or less directly on the use of dry-cleaning soaps. One of the most important is the extent to which soap is removed from the solvent by the clarifying and filtering operations which substitute or are supplementary to redistillation. The presence of soap in the spirit to be distilled causes frothing and in the case of the non-inflammable solvents it may perhaps accelerate decomposition and hence corrosion of metal parts. In many of the clarifying systems installed for use with turpentine substitute, provision is made for periodical agitation with precipitants and absorbents, e.g., a mixture of alkali and activated carbon. In the modern plants for non-inflammable solvents no such operations are included, and if it is decided that soap is advantageous with these solvents it may be necessary to introduce a treatment of this kind. Probably agitation with activated carbon alone would meet the case; experiments made with dirty spirit from a works show that over 90% of the soap and grease remaining in the solvent after filtration are removed by a few minutes' agitation with activated carbon, followed by settling or a second filtration.

Reference may be made finally to the action of dry-cleaning soaps and solvents on the colors of dyed and printed fabrics. We are examining this action in detail; the preliminary results indicate that the cases where colors are seriously affected are exceptional, but such cases do occur in practice. Colors in the form of loosely fixed pigments may be partly or wholly stripped from the fibre. Colors, e.g., para red and its more recent substitutes and relatives produced by combination on the fibre, if they show any tendency to rubbing, will also lose depth in cleaning and may be the cause of stains on fabrics in contact with them. The "suspensoid" class of dyestuffs on cellulose acetate rayon might be expected to give trouble in this respect, but the few tested so far have proved resistant. Some of the vat colors are known to be slightly soluble in dry-cleaning solvents, especially in benzol and solvent naphtha. Cases where the greater part of the color has disappeared in the cleaning bath are usually to be accounted for by the color having been printed or sprayed, in the form of a solution in denatured alcohol or other volatile solvent, with colors either themselves soluble or applied with a binding material soluble in the cleaning liquid.

It will readily be understood that in the course of the investigations outlined, numerous points arose which have been noted for future experimental work. It must be confessed that the work has been handicapped by the desirability of achieving as rapidly as possible some results which might be of service to the subscribing firms. This led on one or two occasions to our breaking away from an interesting line of research to carry out trials which appeared likely to lead more quickly to a definite practical end. With sufficient resources and a larger staff it would be possible to carry out work of two types, entrusting to some more continuous and detailed research, and to others the inquiries of immediate urgency."



Why YARMOR makes good Cattle Sprays

1. These sprays repel for six hours.
2. They insure a 63% kill as determined by the Peet-Grady Method.
3. They do not burn or blister hides.
4. They do not increase the body temperature of cattle.
5. They do not taint milk if usual care is exercised.
6. They do not stain or discolor.
7. They do not cause matting of hair.
8. They help heal open cuts and wounds.
9. They help increase the yield and quality of milk.

Steam-distilled Pine Oil
Steam-distilled Wood
Turpentine
Wood Rosin
Alpha Terpineol
Commercial Abietic Acid
Abalyn
Nitrocellulose
Chemical Cotton

Ask your supplier about Yarmor cattle sprays

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HERCULES POWDER COMPANY
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POWCO
BRAND
REG. U.S. PAT. OFF.

Safeguard Your Profits

One reverse in Business you *can* avoid.

Many a manufacturer has lost a year or more of effort because his product did not "stand up."

The insecticide manufacturer is absolutely dependent upon the *killing power* value of the Pyrethrum Products he uses.

There is no guesswork about POWCO BRAND.

Chemical assays and tests on insects in our Entomological Laboratory guarantee the *killing power* of all Pyrethrum Products sold under the name of POWCO BRAND.

Make sure your product "stands up."

POWCO BRAND safeguards your profits.

JOHN POWELL & CO., INC.

Specialists in Pyrethrum Products

114 E. 32nd Street, New York, N. Y.

These **PYRETHRUM FACTS**

How PYROCIDE 20 is Made

OUR PROCESS OF MANUFACTURE

PYROCIDE 20
CHEMICALLY STANDARDIZED

Greater Accuracy in Killing Power is Assured Under All Conditions

Pyrocide 20 COSTS LESS Than Extracts Parcolate Yourself!

Make your own extracts from the flowers—this is a standard method. You can also make a standardized extract from the flowers—but the cost of this will make the cost of your use Pyrocide 20. This is a fact which would be glad to have an opportunity to prove.

KILLING POWER NEVER VARIES

DO YOU KNOW . . .

—that biological methods of testing insecticides have a margin of error of 25% to 30% because of these and other variables?

RESISTANCE OF FLIES

HUMIDITY OF CHAMBER

TEMPERATURE OF CHAMBER

FREQUENCY OF CONTACT

DO YOU KNOW . . .

that finished insecticide sales dropped about 30% in 1932?

NEWBORN

PYROCIDE 20 GIVES SAME HIGH KILL EVERY TIME

Make your 1933 Contract NOW for this Standardized Pyrethrum Extract. — Save Dollars Later!

Pyrocide 20 Sales INCREASED 50% in 1932!

How Age of Pyrethrum Flowers Affects Cost and Killing Power of Insecticides

When you compare the killing power of Pyrocide 20 with that of extracts made from flowers of different ages, you will find that Pyrocide 20 is the only standardized extract that gives the same killing power under all conditions.

DO YOU KNOW . . .

NOT HALF AS GOOD AS THE LAST CAN I BOUGHT!

IT DOESN'T KILL THEM ALL!

I WANT MY MONEY BACK!

IT ONLY GETS A FEW OF THEM!

I CAN'T BE SURE OF THIS STUFF!

THAT VARIATION IN KILLING POWER is the most frequent cause for complaints against insecticides!

IT'S A FACT: If your insecticide fails to give the same high kill time it is used . . . you are losing sales as fast as you make them. The best product on insecticide with advertising killing power is to use a standardized Pyrocide 20.

UNIFORM KILLING POW

Announcing A NEW FACT

STORED FLOWERS LOSE FROM 30% TO 40% OF KILLING POWER IN YEAR

THE RESULT: 1—Lower Killing Power, or 2—Higher Cost

THE FACTS:

Effect of Storage on Pyrethrum Content of Ground Pyrethrum Flowers	Pyrocide 20	Standardized Extract	Non-standardized Extract
After 1 month	100%	100%	100%
After 2 months	100%	100%	95%
After 3 months	100%	100%	90%
After 4 months	100%	100%	85%
After 5 months	100%	100%	80%
After 6 months	100%	100%	75%
After 7 months	100%	100%	70%
After 8 months	100%	100%	65%
After 9 months	100%	100%	60%
After 10 months	100%	100%	55%

ABOUT PYRETHRUM

When the flowers are in the month of August, the pyrethrum content is at its peak. After this time the content drops rapidly. This is why the killing power of extracts made from flowers of different ages varies so much.

Pyrocide 20 Costs Less

The Pyrocide 20 is made from the flowers of the month of August, when the pyrethrum content is at its peak. This is why the killing power of Pyrocide 20 is so much higher than that of extracts made from flowers of other months.

Pyrocide 20 Costs No More

Pyrocide 20 is the only standardized extract that gives the same killing power under all conditions. This is why it is the most economical insecticide to use.

KILLING POWER NEVER VARIES

UNIFORM KILLING POWER

Say you saw it in SOAP!

Still Hold True in 1933!

PYRETHRIN CONTENT OF PYROCIDE 20 IS GUARANTEED

THE pyrethrin content of Pyrocide 20 is guaranteed at 2.15 grams per 100 cc., assuring uniform high killing power.

★

2.15 grams per 100 cc. means 2.61% pyrethrins. This is the equivalent of each gallon containing the entire active principle from 20 pounds of flowers having a pyrethrin content of .90%.

★

The strength of Pyrocide 20 is not affected by deterioration of flowers because the flowers that go into its manufacture are selected by assay in Japan by our exclusive laboratory there. Only those with a pyrethrin content of .90% or better are accepted. Last year over 30% of lots tested were rejected.

★

Besides chemical standardization, Pyrocide 20 is doubly checked by the Peet-Grady method.

★

You can order Pyrocide 20 in steel drums of 15, 30 or 53 gallons. Warehouse stocks in New York, Los Angeles, Minneapolis and many foreign cities. Freight allowed.

Write today, McLAUGHLIN GORMLEY KING CO., 1715 Fifth Street S.E., Minneapolis, Minnesota
Pyrethrum Specialists Since 1901

PYROCIDE 20

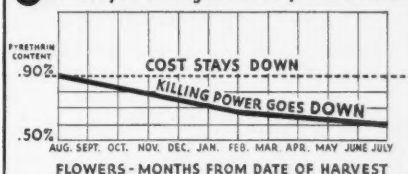
STANDARDIZED EXTRACT OF PYRETHRUM FLOWERS

Say you saw it in SOAP!

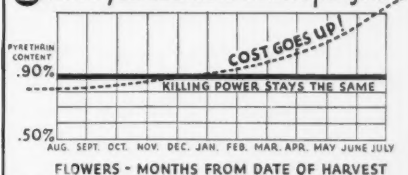
How Age of Pyrethrum Flowers Affects Cost and Killing Power of Insecticides

Flowers lose between 30% and 40% of their pyrethrin content in aging one year from date of harvest. The result is either lower killing power or higher cost. Here's what happens if you percolate your own flowers or use a non-standardized concentrate.

① When you disregard the Pyrethrin Loss



② When you add more flowers per gallon



③ When you use Pyrocide 20



ROTENONE VS. PYRETHRINS

C. B. Gnadinger and C. S. Corl, of our laboratory, have recently conducted experiments to determine the relative killing power of rotenone and pyrethrins as fly spray ingredients. These experiments are described in detail on pages 1237-1240 of the December issue of Journal of Economic Entomology. Reprints of this article may be had upon request to us.

Perfumes For

THEATRE SPRAYS

It makes no difference whether you use alcohol or water as a base. We can supply an odor to meet your requirements—an odor that will prove popular with your customers.

A few suggestions

for alcohol base sprays

	Lb.
American Thistle No. 1010.	\$2.25
Lilac No. 59.....	2.50
Gardenia No. 1756.....	5.00
New Mown Hay No. 319.	2.75
Peony No. 446.....	4.00
Rose No. 310.....	2.50
Trefle No. 619.....	2.85
Violet No. 611.....	3.10
Wild Flowers No. 5300...	1.75

Used one ounce to two gallons of alcohol—either full strength or diluted

for water base sprays

	Lb.
Bouquet W. S. No. 636...	\$3.25
Honeysuckle W. S. No. 561	2.25
Narcissus W. S. No. 3855.	2.75
New Mown Hay W. S. No. 260	2.50
Lilac W. S. No. 19.....	2.50
Oriental W. S. No. 3858..	2.50
Rose W. S. No. 560.....	2.75
Trefle W. S. No. 4855....	3.00
Violet W. S. No. 261....	2.75

Used one ounce to three or five gallons of water according to strength desired



P. R. DREYER INC.

12 E. 12th Street

New York

"It's the Odor that Sells the Product"

Say you saw it in SOAP!

Announcing

POWCO BRAND

REG. U.S. PAT. OFF

Odorless Pyrethrum Extracts

AS pioneers in constructive and practical research in Pyrethrum Products, we are glad to offer to insecticide manufacturers the first *odorless* basic pyrethrum concentrated extracts. These new POWCO BRAND *odorless* pyrethrum concentrated extracts are designed for use in the manufacture of finished liquid insecticides free from the odor of kerosene, and without residual odor except that of the perfuming material, when and if used.

THESE new *odorless* pyrethrum concentrated extracts when used with a deodorized or odorless petroleum oil base, which is now available from refiners, produce odorless fly sprays—sprays with all the full killing power value and stability of the regular POWCO BRAND Pyrethrum Extracts.

Let us send you samples and further details

JOHN POWELL & CO., INC.

Specialists in Pyrethrum Products

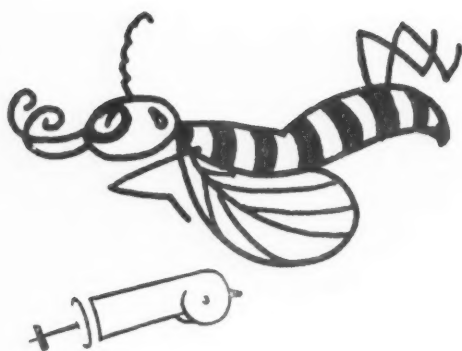
114 E. 32nd Street

New York, N. Y.

Say you saw it in SOAP!

A P L E A S U R E T O D I E

Sweet shades of wildflow'r
Sniffed the Fly
What charming stuff is this?
I've ne'er inhaled
(And that's no lie)
An odor of such bliss.



That fragrant lung full
Did the trick
The insect passed away
He never knew
That he was sick
With FLORENE in the spray!

FLORENE is an aromatic chemical that makes fly sprays smell pleasant. It is a sharp clean odor which does not linger in the atmosphere after a room has been sprayed. FLORENE covers the smell of kerosene at a cost of two cents up per gallon, depending on the grade of kerosene.

Ask us for more information

GIVAUDAN-DELAWANNA
80 FIFTH AVENUE, NEW YORK, N. Y. INC.

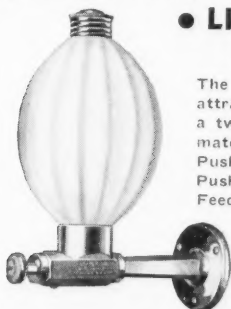
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BIG profits WITH THIS PROVEN LINE OF SANITARY SPECIALTIES



AIR PURIFYING BLOCS

Produced by the pioneers and original patentees of moulded blocs. Hard uniformly perfumed blocs made of 100% para and finest essential oils. In sizes and shapes to fit any containers. Colors and odors to meet current demand. Packed for you under your private label if desired. Also Urinal Blocettes individually wrapped in cellophane and Deodorizing Crystals in bulk or packed in handsome lithographed tins with or without our name.



● LIQUID SOAP DISPENSERS

The famous "SOAPERIOR" line. Strong, attractive leak-proof dispensers carrying a two years' guarantee against defect in material or workmanship. Push-in Valve type (illustrated) and Push-up Individual Dispensers—Gravity Feed Equipment. Portable and Wall type Dispensers for Hospitals. Made in our own shops of top-notch materials. Yet priced surprisingly low.

● LIQUID TOILET SOAPS

Concentrated 42% Soaps made of finest edible Cochin Coconut Oil or Olive Oil—bland, neutral, absolutely pure and free of fillers or adulterants. Also Prepared Soaps to meet any specifications. Special soaps for Industrial and Surgical use and pure Castile Infants Soap for hospitals.



● POLISHES

High-grade Metal Polishes which remove tarnish but do not scratch or blemish brass, silver, copper, etc. Fine quick-drying Furniture Polishes. Non-inflammable and easy to apply.

● LIQUID SCRUBBING SOAPS



A type for every floor—to meet any price requirement. Safe, neutral cleaners for fine wood, tile, marble, linoleum, cork, rubber, rubber tile, terrazzo, travertine floors. Approved by leading manufacturers for fine flooring as well as for Furniture, Wainscoting, Painted, Enameled and Varnished Surfaces.

● BLOC CONTAINERS

Neat distinguished perforated containers, made of 24 gauge heavy metal—equipped with lock and sliding back.

In White Enamel, Porcelain, Oxidize or Nickel Plate with your nameplate or plain.

In three sizes:—

Large $3\frac{1}{4}'' \times 3\frac{1}{4}'' \times 9\frac{3}{4}''$ —Holds 40 oz. bloc
De Luxe $2\frac{3}{4}'' \times 2\frac{3}{4}'' \times 8''$ — " 25 or 16 oz. bloc

Aerzonette $3\frac{1}{2}'' \times 1\frac{1}{2}'' \times 1\frac{1}{2}''$ — " 4 oz. bloc
Can be supplied plain or with your nameplate.



● DISINFECTANTS

Of Pine Oil containing 70% pure steam-distilled pine oil (Disinfectant—germicide—cleaner and deodorant in one)—also lower cost Pine Disinfectants and Deodorants. Coal-tar Disinfectants ranging from high-efficient 18-20 to low-priced products made to sell at a price. Liquid and Powder Chlorine Disinfectants. Each batch tested and germicidal strength guaranteed.



● SOAP AND SHAMPOO BASES

Made from special blends of Coconut or Olive Oil—concentrated to 65% soap solids—producing more soap per pound than average base and making fine bland generous-lathering soaps.

● FLOOR SURFACING MATERIALS

Mopping Varnishes—Quick-drying rubless Waxes—Floor Sealers, etc. Special finishes for linoleum, terrazzo, tile, cork, slate, marble, concrete, travertine, magnesite, quarry, rubber, rubber tile, soft asphalt and bitumen floors. Let us solve your special floor problem.



● INSECTICIDES—MOTHICIDES

High-powered but non-poisonous stainless and odorless fly sprays meeting the Insecticide and Disinfectant Manufacturers' standard. Also Concentrated Fly Spray (may be diluted with 19 parts petroleum oil to make 20 gals. full strength spray). Ready-to-sell Insecticides—Specifics for Bedbugs—Mothicides—Larvacides—Mill and Weevil Sprays.



BUILD BUSINESS UNDER YOUR PRIVATE LABEL

- SEND FOR SPECIAL PRICE BULLETIN quoting a "new low" in prices. With this line you can meet any price competition. Any product can be supplied without our name—packed under your private label.

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433-41 So. Western Avenue, Chicago, Illinois

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Certified Coal-Tar Disinfectants

are known and used throughout the world because of their quality, dependability and efficiency. They are supplied only in concentrated form, dilute readily with water to form rich, milky emulsions, which do not separate on standing, and have a good clean odor of tar. Each batch is tested for germicidal strength.

Cresol Comp. U. S. P.

also known as Liquor Cresolis Compositus, U. S. P., is made in exact accordance with the specifications of the U. S. Pharmacopoeia. Phenol coefficient $2\frac{1}{2}$ to 3. Dilutes with water to form clear, amber-colored solutions. Largely used by the medical profession, hospitals and veterinarians.

Crestall Fluid

is similar in composition, appearance and odor to Cresol Compound, U. S. P., but prepared from refined cresylic acid as a base. Approximately twice as strong as the U. S. P. product, and very effective in preventing the spread of animal diseases. Approved by U. S. Bureau of Animal Industry.

Mosquito Larvaecide

A coal-tar product employed for killing mosquito larvae. Effective in dilutions of 20,000 to 40,000 to one. Superior to petroleum oil, as it is not affected by rain-fall or wind and does not involve fire hazard.

Pes-Tox Insecticide

of the pyrethrum type, pleasantly scented. Quickly kills practically every type of crawling, flying and hopping insect. Light lemon color. Especially effective when used in the form of a spray.

Pine Oil Disinfectant

A fragrant pine product, made from pure steam-distilled pine oil according to the formula of the Hygienic Laboratory of the U. S. Public Health Service. Mixes freely with water to form good white emulsions with pleasant pine odor. Free from mineral oil or other adulteration.

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New York City and New Jersey Representatives:

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PERFUMES *for* SPRAY PRODUCTS—

OUR line of perfume odors for fly and theatre sprays, para blocks, household insecticides and allied products has been *laboratory tested*. By designating a perfume as a *spray odor*, we are certifying that it has been tested and proven successful both as to covering power and odor value. Try us out. Send a sample of your product—unperfumed—expressing a preference as to perfume if desired.

UNCO WATER - KLEER perfumes—a new series of perfume compositions, treated by a special process rendering them completely soluble in water without the use of alcohol. Simply dilute them in distilled water. They will not cloud or separate.

All types

\$2.75 per pound

A Few Suggestions

BOUQUET
CARNATION
FLORAL
FOUGERE
HONEYSUCKLE
JASMIN
LAVENDER
LILAC
ORANGE BLOSSOM
ORIENTAL
ROSE
TREFLE



UNGERER & CO.

13-15 West 20th Street
NEW YORK

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●

For Established

CONCENTRATED PYRE

PYREFUME

A Concentrated Extract Representing 30 Pounds of
The Ideal Strength for a Pyrethrum Concentrate
The universally accepted, harmless, but highly effective

SPECIAL HIGH CONCENTRATES
THE LAST WORD IN SCIENTIFIC

TESTED CHEMICALLY with the same precision with which we test our Alkaloidal Drugs

Diluted 29 parts of Petroleum Distillate to one part of
standard strength, representing one pound of Pyrethrum Flowers.

We also manufacture PYREFUME SUPER

PYRETHRUM

DOUBLY

Prices are favorable. If you have not

ROTENONE C. P.

ROTE

PURE AND IN

We are pioneers in the production

ROTE

Scientifically prepared extracts containing the full amount of
These products are recommended for effective dusting powders.

ROTENOIDYDS SOLID EXTRACT. ROTENOIDYDS POWDERED EXTRACT. ROTENOIDYDS
ROTENONE AND PYRE

DERRIS ROOT with definite Rotenone content

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S. B. PENICK

Importers, Exporters, Manufacturers

132 Nassau Street

INSECTICIDE

Say you saw it in SOAP!

Manufacturers Only

THRUM EXTRACT

SUPER 30

Doubly Tested Pyrethrum Flowers to the Gallon

Contains 3.375 grams Pyrethrins to each 100 ccs.

base for household, cattle, and agricultural sprays

FOR EXPORT TRADE

ACHIEVEMENT IN PYRETHRUM

TESTED BIOLOGICALLY in our own laboratory by our improved physiological methods

PYREFUME SUPER 30, produces a spray of uniform,
to the gallon regardless of the variation in Pyrethrum Flowers.

30 with Alcohol and other bases.

P O W D E R
TESTED

contracted for your 1933 requirements write us.

NONE
COMBINATIONS

ROTENONE TECHNICAL

of this product commercially.

NOYDS

the Resins of Derris Root with a standardized Rotenone content.
and in liquid sprays for agricultural and horticultural use.

ALCOHOLIC (Fluid) EXTRACT. ROTENOYDS ACETONE (Fluid) EXTRACT.
THRUM CONCENTRATES

in granulated and air-floated form.

ESTABLISHED MANUFACTURERS ONLY

& COMPANY

and Millers to the Trade

SPECIALISTS

New York, N. Y.

Say you saw it in SOAP!

van Ameringen-

From a Fad to a Fact

A few years ago, some bright spirit put perfume into a kerosene fly spray. Some said it was a fad, but it sold goods.

Today it's an accepted fact. *Insecticides, deodorants, disinfectants*—all must be rendered less objectionable, by adding to them a pleasant odor.

Now we've all gone a step further. We've found out what kind of odor does the work best, *without interfering with the insecticidal value* of the preparation.

Not every so-called insecticide perfume is safe to use, as many ingredients tend to counteract the effectiveness of the pyrethrum.

You want your insecticide to work well and sell well. Our perfumes not only help the odor, but they are especially designed *not* to hinder insecticidal activity.

Send for samples.

van Ameringen-Haebler, Inc.

Aromatic Essentials

315 Fourth Avenue, New York

180 No. Wacker Drive, Chicago

438 West 48th St., Los Angeles

42 Wellington Street, E., Toronto

Factory, Elizabeth, N. J.

Say you saw it in SOAP!

Haebler, Inc.

Perfumes for Insecticides

For insecticides made with pyrethrum and kerosene, we suggest using one to six drams of any of the following oils in one gallon of finished spray.

Orange Blossom No. 96	\$4.00 lb.	Rose No. 12	\$2.00
Orange Flower No. 11	3.00	Lilac No. 1	3.50
Orange Flower No. 12	2.00	Lilac No. 2	3.00
Cedar No. 11	2.00	Lilac No. 3	2.50
Cedar No. 12	1.00	Lilac No. 4	1.10
Jasmin No. 11	2.50	Lilacine No. 11	1.10
Jasmin No. 12	1.50	Vanilla Bouquet for Spray	3.00
Lavender No. 135	1.00	Bouquet No. 118	1.50
New Mown Hay No. 11	3.75	Bouquet No. 11	3.00
New Mown Hay No. 12	1.50	Bouquet No. 12	2.00
New Mown Hay No. 13	2.00	Spray Odor No. 195	4.80
Oriental	1.50	Spray Odor No. 353	4.50
Narcissus	2.25	Spray Odor No. 457	3.75
Violet No. 11	3.00	Spray Odor No. 276	3.00
Violet No. 12	1.75	Spray Odor No. 259	2.00
Mint No. 11	1.50	Spray Odor No. 11	5.50
Mint No. 12	1.00	Spray Odor No. 12	5.00
Honeysuckle No. 11	3.25	Spray Odor D. No. 5	5.25
Honeysuckle No. 12	3.00	Spray Odor No. 23	4.50
Rose No. 11	2.25	Tuberose	4.25

Perfumes for Deodorizing Blocks

Special solutions to be used from 1 to 2 pounds to 100 pounds of deodorizing crystals. They can be used with *either* paradichlorbenzene or naphthaline, or a combination of the two. *Any of the following colors may be used with any of the odors listed below.*

Colors	Odors
Amber	Bouquet—many bouquets to choose from, state type wanted.
Blue	Cedar
Chypre green	Hay
Light green	Jasmin
Rose	Lilac
Violet	Lily
Yellow	Narcissus
	Orange
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	Peppermint
	Pine
	Rose
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Grade A—any of the above odors with or without color. . \$2.50 lb.

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INSECTICIDE AND DISINFECTANT SECTION



A Department of SOAP

SOAP is official publication of *The National Assn. of Insecticide and Disinfectant Manufacturers.*

For 1933

FOR the general run of manufacturers and jobbers in the insecticide and disinfectant fields, 1932 was one of the poorest years in some time. Sales dropped precipitously in numerous instances. Price competition was the worst on record and left little resembling a profit in most transactions for the average house. Judging from opinions secured at the recent annual meeting of the National Association of Insecticide & Disinfectant Manufacturers, more companies lost money during the year than made a profit.

In looking forward to the coming year, the view was taken that things could not be much worse than they had been. The industry as a whole had already got down to hard pan, and to a great extent, had adjusted itself accordingly. No illusions regarding the future remain. The deck has been cleared of surplus gear. The industry is in far better position today to operate at a profit on a restricted and economical basis than it was a year ago.

—o—

Rotenone Research and Publicity

NEW sources for rotenone, real or imaginary, keep bobbing up here and there at the rate of about one a month. Some recent announcements have emanated from the Department of Agriculture at Washington in the form of publicity releases. The latest is

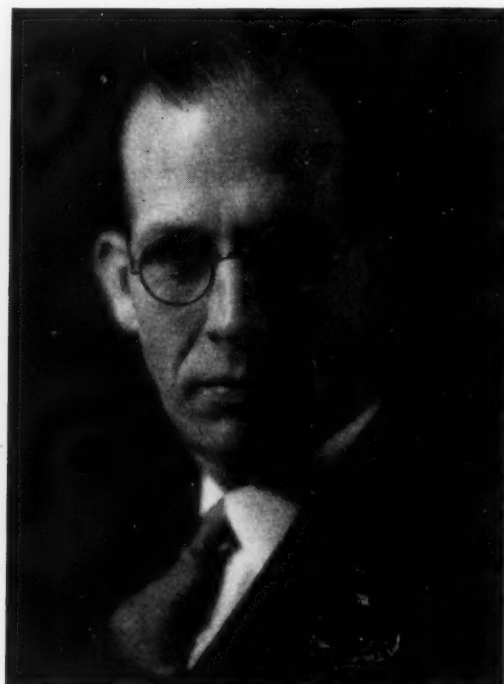
the announcement of the discovery of the presence of rotenone in Devil's Shoestring, which grows wild in the United States east of the Mississippi River. The expectation of a drop in the price of rotenone insecticides as a result of this discovery, is included in the story as it reaches us.

There can be no quarrel with the honest investigational work of the scientific men of the Department of Agriculture. If, however, their findings are made the basis for sensational news stories to the general public, stories which are too often premature and misleading, then a damper should be put on those responsible for the release of the stories. This Devil's Shoestring is an example. Little is known except that the root does contain rotenone. The wild plant is widely scattered and of doubtful commercial supply. The Department will not start even its experimental cultivation of the plant until next spring. With these facts in view, we are reminded too much of certain potash developments during the war which fooled many of the leading chemists of the country.

We repeat that real and enthusiastic research at Washington is worthy of the ardent support of the entire insecticide industry. However, we do believe that announcements to the lay public should be tempered with more caution, and that accompanying predictions of a commercial nature should not be made too freely.



Peter Dougan, President, 1933



Charles P. McCormick, 1st Vice-President, 1933

National Association of Insecticide and Disinfectant Mfrs.

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William J. Zick.....	Stanco, Inc., New York

Nineteenth Annual Insecticide and Disinfectant Convention

THE Nineteenth Annual Meeting of the National Association of Insecticide & Disinfectant Manufacturers closed December 13th after a two-day session at the Hotel New Yorker, New York, with an attendance of 200. The meeting went on record in favor of a general sales tax, it postponed official adoption of the F. D. A. Method for testing disinfectants until the summer meeting next June, and it elected new officers and members of the Board of Governors. Peter Dougan of Merck & Co., Rahway, N. J., was chosen president for 1933 to succeed Evans E. A. Stone who refused to accept a renomination. Charles P. McCormick, president of McCormick & Co., Baltimore, was elected first vice-president. Samuel H. Bell of the Koppers Products Co., Pittsburgh, was named second vice-president. John Powell of John Powell & Co., New York, was re-elected treasurer and Harry W. Cole of Baird & McGuire, Inc., Holbrook, Mass., was chosen secretary again. Members of the Board of Governors for 1933 were elected as follows: Walter J. Andree of Sinclair Refining Co., New York; C. C. Baird of Baird & McGuire, Holbrook, Mass.; J. L. Brenn of Huntington Laboratories, Huntington, Ind.; F. A. Hoyt of Frederick Disinfectant Co., Atlanta; H. W. Hamilton of White Tar Co., Pittsburgh; Evans E. A. Stone; Dr. Robert C. White of Robert C. White Chemical Co., Philadelphia; S. S. Selig of The Selig Co., Atlanta; Dr. George F. Reddish of Lambert Pharmacal Co., St. Louis; William J. Zick of Stanco, Inc., New York.

An amendment to the constitution of the Association calling for a reduction in the membership of the Board of Governors by the elimination of the automatic election of past-presidents, and setting the Board membership "at ten active members" and the officers, was adopted by the Association. A change was also made in the requirements of geographical location of Board members, five now being located so as to be readily available for Board meetings. Quorum requirements were advanced from six to seven members.

Preceding the opening of the regular sessions, a meeting of the 1932 Board of Governors was held at the New Yorker on Sunday evening, Dec. 11, which was attended by five officers and nine directors, presided over by President Stone. At that meeting, the budget for 1933 was adopted. E. I. du Pont de Nemours & Co., Wilmington, were elected to membership by the Board.

Following the annual address of President Stone and the report of Secretary Cole, the first regular session of

the convention on Monday morning was taken up primarily with reports of Committees. These reports are given herewith. (Leading addresses, reports, etc. not published in this issue, will appear next month.)

Report of Committee on Insecticides

By C. P. McCormick

THERE are many problems that can be dealt with in this report and the Committee could take up ample space in talking about other problems that should be considered, but this being a year of economy—we shall try to be brief in subjects as well as in words.

No. 1: The Standard as sanctioned by the Board, the Association and the different Insecticide Committees has indeed caused a great deal of dissent and comment, yet the Committee still feels that this is a starting point and would like the entire interested body to consider this Peet-Grady Standard as but a starter upon which to build a future satisfactory standard. The modification or enlargement of its program rests entirely with the Standardization Committee under the able leadership of Mr. Gothard. There are many points being brought up from time to time that will be referred to him rather than to our Committee.

No. 2: The Century of Progress at Chicago in 1933 will have an exhibit in Biology that might be of considerable interest to our Association as a whole or to a group of Insecticide Manufacturers. While the exhibit idea was suggested to our Company, we felt that it was an Association matter.

This exhibit would show a rat, flea and bubonic plague cycle and would demonstrate the methods of plague transmission. It would also include the projection of the plague bacillus, a large model of a flea, a demonstration of rats landing from foreign ships and features of the plague story.

It might also show the life cycle of the malarial mosquito as well as of the mosquito that transmits yellow fever. Also the life cycle of our common mosquito *Culex*.

These mosquitoes would be very much enlarged and worked into a natural history setting, resembling a small museum group, which would also depict the life cycle of the various organisms by models or by transparent colored films showing how this parasite is adapted to life and the mosquito, as well as the life of man.

Various scenes showing the effect of the diseases which may be carried by mosquitoes could be added as supplementary matter.

Also a feature of the exhibit might be to have a very large model of a house fly well mounted on a pillar in the corner of the exhibit above the heads of visitors. Below this model would be an exhibit showing the life cycle of the fly, the diseases it carries, and a demonstration how sprays and powder might destroy such an insect pest, etc.

There are many other insects that could be discussed and could be brought out vividly and our Association might well pursue such a publicity campaign. I firmly believe that we would get further as an industry rather than as an individual in a matter of this sort, and have the donors' names placed in a prominent position. I earnestly recommend that this be given quick consideration.

The entire exhibit would occupy a unit twenty feet square, thus covering an area of about 400 square feet. Approximate price and further details can be had upon request from the Committee.

No. 3: Since May 1st, 1932, we have not used horse manure as a breeding media for houseflies. Instead we have

used the Bran Mash-Alfalfa Meal Mixture developed by Dr. H. H. Richardson who is now employed by the United States Department of Agriculture. The work connected with the development of this formula for rearing houseflies was done when Dr. Richardson was working at the Iowa State College of Agriculture, Ames, Iowa. This information was published in "SCIENCE." The formula as Dr. Richardson originally proposed is as follows:

Wheat bran	3¼ lbs.	} Mix thoroughly
Alfalfa meal	1¾ lbs.	
Water	5,000 cc	} Mix thoroughly together
Yeast suspension	300 cc	
(Prepared from 1 lb. baker's yeast to 2 liters of water. This should be kept on ice.)		
Diamalt ²	25 cc	

After using Dr. Richardson's proposed formula for several months, we made several minor changes such as changing the amount of Water and Yeast Suspension used as well as changing to a malt that contains a diastase. Using this media for rearing houseflies seems to be very satisfactory since the flies seem to be very uniform and of a high resistance. The checks that we employ to determine resistance of our flies are as follows: The use of a straight kerosene killing no more than 5% of the flies in 24 hours; to spray Hercules Yarmor Pine Oil when used by itself will kill consistently about 70% of the flies in 24 hours. By such tests as these, we assume that our flies at the present time run more uniform and are of a higher resistance than formerly. These flies have received no direct sunlight for the last six months, the only light they receive is indirect daylight from the North side of the building or from special electric light bulbs.

We are now making some experiments, incorporating materials into the mash which should liberate ultra-violet rays. However, we are unable to report at this time whether such a practice will merit continued use.

No. 4: It is most gratifying to report that analyses made on nationally and locally known sprays show that the toxicity is far greater since the Association has given wide publicity to the Peet-Grady method. Without naming the brands—

- A Brand remains about the same in toxicity.
- C Brand has a slightly better knock-down with or about the same kill.
- D Brand has improved over previous years by about 50% in kill.
- E Brand has increased the kill 10%.
- F Brand is slightly better, while
- G Brand is not as good as formerly.

The reasons for these changes we are not concerned with, but we feel that it is a better day for the industry when quality is improved. We congratulate even the largest spray manufacturers upon improving their material in killing properties as it means a better consumer acceptance as a whole for the products.

No. 5: The question of concentrates always creates a three-cornered argument, yet the Insecticide Committee would like to place itself on record as saying that any manufacturer of insecticides who suggests the terms "5 to 1" or "20 to 1" should convey definitely what it implies. Tests made by unbiased people reveal that some "20 to 1" concentrates on the market, when diluted one part of extract to nineteen parts of oil, kill 65% of the flies in 24 hours. Then other "20 to 1" sprays might well be called "25 to 1" as they would do the same job. We suggest, therefore, that the manufacturers of insecticides regardless of their opinion, very clearly specify what their trade names mean and what the products can be used for. In other words, the concentrate people could well get together and set up a standard among themselves so that the purchaser might not be fooled by price, etc.

No. 6: This Committee would like to place itself on record as suggesting that some of the statements made on some of the cans by some of the spray manufacturers be labeled differently when they are either ready to print a new label or to re-order cans. The sentence "Non-poisonous when used as directed" might

well be employed rather than the word "Non-poisonous"; "Will not stain when used as directed" should be another question for discussion. The latter is a very important factor.

It has been suggested to the Committee that such a phrase as "The manufacturer is responsible when this material is used as directed on label" or something to this effect might protect the manufacturer against any possible fraudulent claims.

No. 7: The Proposed Liquid Insecticide Annual Sales Compilation by the Government will be undertaken immediately upon the favorable report of the majority of the manufacturers in the Association. In other words, the Government will not undertake a survey of any kind unless the industry or the majority of the industry will assent to co-operating in giving these reports. This report was given to our President, Mr. Stone, some six weeks ago. Whether he desires to bring it up on the floor of the convention or by referendum, matters little to the Committee. They will carry out the functions and desires of the association as soon as we are told what to do.

No. 8: The Insecticide Committee feels that the most important work after all is to get together all of its members in a closed meeting where they may discuss problems that are really commercial in nature and actually beneficial to each sincere thinking individual. It is hoped that such meetings will be not only continued but encouraged and that a more sincere spirit of co-operation will result from these co-operative meetings.

Respectfully submitted,
C. P. McCORMICK, Chairman,
ROBERT C. WHITE,
W. J. ANDREE,
W. J. ZICK,
W. G. GRIESEMER.

Report of Insecticide Standardization Committee

By N. J. Gothard

BEFORE taking up the actual report of work done by this committee, I would like to call your attention by means of two incidents, to the necessity of the further and more exact development of a standard method for the testing of liquid insecticides. The Insecticide Committee has seen fit to set up a definite minimum standard for liquid household insecticides to be determined by the Peet-Grady method. This of course implies that there is a standard method available to every one and by which any one suitably trained can determine whether or not any given product has a satisfactory killing power.

A short time ago a man, not a member of the Association, came to one of the members of the Insecticide Standardization Committee with a supposedly new development in the insecticide field. He had with him a report from a supposedly reputable consulting firm, also not connected with the Association, stating that the material had been tested by the official Peet-Grady method and had been found to show 98.2% down and 90.4% dead. It was further stated that the test was conducted in a chamber of the prescribed standard and that the test was conducted in strict accordance with the rules specified therefor. When this identical sample was tested in the laboratory of the committee member, it was found to test 74% down and 29% dead.

In another case, another laboratory, not connected with the Association, has stated that it is prepared to make the Peet-Grady test. Yet only a short time before this announcement was made, a member of this laboratory told one of the members of this committee that he did not believe that the Peet-Grady test was of much value, since, in his tests all insecticides, even admittedly very weak ones, would show a killing power of 100%, so that he had been forced to modify the method to suit his needs.

I relate these incidents to illustrate that while we have a standard, based upon a method which is, by implication, a standard method, the method is actually in need of further study and refinement. It needs to be developed further so that any one of suitable training can follow the method, and obtain reliable results. A method which will permit of such divergent results as described cannot properly be called a standard method. In order that the method may be offered as a true standard method,

²A by-product of the Fleischmann Yeast Company containing malt sugar. Molasses could probably be substituted for this material.

its entire procedure must be so closely defined that any laboratory which follows the prescribed procedure accurately must obtain results which are reasonably comparable with those obtained by any other laboratory. There would of course still be no protection from laboratories which deliberately depart from the standard procedure, but the method must be so defined that such departures could not be made, as they can now, without actual falsification.

This is the problem which the Insecticide Standardization Committee faces and on which we have been working, although I regret to have to report that not as much progress has been made as was hoped for. Our first problem was to secure a standard atomizer. Tests made by the members of the committee showed that, with the atomizers then being used in their laboratories, the time required for the discharge of 12cc of insecticide under 12½ pounds of pressure varied from ten seconds to 210 seconds. The time required for the discharge of a given volume under standard pressure is a measure of the fineness of the spray produced, from which it is evident that there has been a great variation in sprays used in the different laboratories. Since the fineness of spray has a great effect on results obtained, it is evident that no two laboratories were conducting the test in the same manner as far as fineness of spray is concerned. It was further evident that ordinary commercial atomizers, such as can be purchased readily on the market, cannot be relied upon to be uniform and to produce sprays which are identical with each other.

This brought up the necessity of having special atomizers made to order for our use which would be carefully calibrated and would be guaranteed to deliver uniform volumes of spray in a given period of time under standard pressure. The development of such a standard atomizer has been very slow and this, together with the inability of the chairman of this committee to devote as much time to it as would have been desirable, has accounted for our lack of further progress in the standardization of the method. However, this work has now been practically completed and it is expected that these standard atomizers will be available very shortly.

It is then hoped that more rapid progress can be made with the development of some sort of a standard by which the resistance of flies in any laboratory can be measured so that results between different laboratories will be comparable regardless of differences in the resistances of flies in those laboratories

Report of the Scientific Committee— Insecticides

By Dr. Charles H. Peet

ALTHOUGH much work has been reported during the past year on insecticidal studies, the larger part of it has had to do primarily with agricultural products and these are, of course, not included in this report. We have however, gone thoroughly over such developments as relate to the so-called household type insecticides and a resume of publications during the year has been prepared.

Synthetic Insecticides

1932 has been a rather lean year so far as work on synthetic insecticides is concerned. Wedekind has been issued a German patent on chlorinated acetone oil containing less than 10% Cl. This product is to be used in C_6H_5Cl , $C_{10}H_7Cl$, $C_6H_5NO_2$ or $C_6H_5(CH_3)_2$ and mixed aromatic-aliphatic ketones may also be added. A French patent issued to Imperial Chemical Industries, Ltd., covers a mixture of $o-C_6H_4Cl_2$, $\alpha-C_{10}H_7Cl$ or C_6H_5Cl and/or $p-C_6H_4Cl_2$, C_6Cl_6 or $C_{10}H_8$ and a vulcanizable oil such as sardine oil, herring oil or linseed oil with SCl_2 . Esters of oxalic acid have been patented by Karl Marx and Hans Wesche as insecticides but they appear to have been designed primarily for agricultural use.

In a study of heterocyclic N bases by Craig at Iowa State College it was found that in this series the toxicity increased as basicity decreased. It appears that toxicity is related to basicity only as basicity is related to reactivity.

Dhu has patented a mixture of kerosene, wintergreen, citronella, salt and bitumen in Australia as an insecticide and Sukata has a Japanese patent covering a mixture of seed oil, cinnamon oil and flour. Efficient insecticides can be made from suitable

essential oils and mineral oil, for example, a 10% solution of oil of white thyme in mineral oil, according to Panncritz.

Rotenone

More progress has been reported on the use of extracts of derris root, that is, of Rotenone. A series of papers by LaForge, and his collaborators, has been published in the Journal of the American Chemical Society, which has led to the complete elucidation of the constitution of the Rotenone molecule, and some of the degradation products of this molecule have been synthesized. In a general way, it can be said that with Rotenone, as with the pyrethrins, derivatives are far inferior in insecticidal strength to the original, or parent, compound.

In the course of studies upon the effectiveness of Rotenone, Shepard and Campbell have reported the mean lethal dose of Rotenone to silkworms to be .003 mg. per g. of body weight. They believe the degree of toxicity may depend upon the physiological characteristics of the insect species. This is supported by the findings of Tattersfield and Gimmingham who reported tests on extracts of 42 plants used as fish poisons, only 3 of which proved toxic to the bean aphid. Extracts of black Haiairi were toxic to young larvae of certain moths but less so to older larvae.

A study of tuba root from the Dutch East Indies by Spoon showed that *D. malaccensis*, though it contained much poisonous matter, contained little Rotenone (about 3%). *D. elliptica* gave less ether extract but more Rotenone (about 6%). Not over 8% moisture should be in the roots for safe storage.

Imai has been granted a Japanese patent covering the use of $C_{10}H_8$ and Rotenone dissolved in volatile vegetable oils, such as turpentine, camphor oils, etc. Jones reported in the Journal of Industrial and Engineering Chemistry that CCl_4 is a more satisfactory extractive for Rotenone than is $(C_2H_5)_2O$ because it gives a more selective separation, is free from fire hazard and involves less loss. A Japanese patent has been issued to Tokitaka Iiba and Syozo Nakatuka covering a mixture of 67.6% C_6H_5Cl and 32.4% methyl alcohol for use in extracting Rotenone or the pyrethrins.

Pyrethrum

A paper by John Powell in SOAP gave a very comprehensive review of the development of pyrethrum insecticides in the United States. Another extensive review of the same subject from a rather different angle was published in the Bulletin de la Societe pour la Encouragement de la Industrie Naturelle by Emile Perrot. This paper gives many technical details regarding the preparation of pyrethrum insecticides. Gnadinger & Corl describe the manufacture of concentrated pyrethrum extracts in considerable detail in the Journal of Industrial and Engineering Chemistry. The solvent used is $C_6H_5Cl_2$ and this is removed by distillation in vacuo. The resulting oleoresin is extracted with any one of several organic solvents, made up to volume, freed from resinous matter by cooling and stored. This solution has been kept for 13 months under proper storage conditions without loss of strength.

H. H. Richardson says that the pyrethrin I content of pyrethrum powders affords an accurate method of evaluating insecticidal power. The pyrethrin content of an experimental crop of pyrethrum grown in England was found to be 1.7% total pyrethrins and .57% pyrethrin I according to Jary.

Pyrethrum caused morphological changes in the hypodermis, muscles and nerve fibres of the transparent larvae of *Corethra plumicornis* but injury to the nervous system is regarded as the essential point in the action of the pyrethrins.

Le Fly Tox has been granted a French patent on an extract of pyrethrum in glycol or its derivatives. A chloroform extract of pyrethrum was found effective against ants, mosquitoes and cockroaches by Holt and Kintner.

Hartzel and Wilcoxon report that pyrethrum extracts are toxic to many insects, spiders, centipedes, snails, earthworms, frogs and tomato-worm larvae but heat, sunlight, ultraviolet light and age cause a loss in the pyrethrin content of the flowers. Tattersfield has also found that light and air cause a loss in the strength of pyrethrum powders. They present evidence that this is due to oxidation under the influence of light. Decomposition is more rapid in the case of artificial powders than in ground flowers but there is no evidence that the flowers contain an antioxidant although antioxidants do retard the loss in activity of artificially prepared dusts.

A rather remarkable patent, in view of the foregoing, has been

issued upon an oil extract of pyrethrum which is then treated with a powerful oxidizing agent.

A paper by Gnadinger & Corl in Industrial and Engineering Chemistry shows that ground pyrethrum flowers under various conditions of storage lose from 30.0-43.6% of their pyrethrin content in one year and that the loss continues for two years or more although it seems to decrease with time.

Toxicity Studies

A number of members of our Association are interested in the use of fluorides as insecticides. These are, of course, used as stomach poisons and are dispersed in and about the infested precincts. Back recommends either a mixture of 12 parts of NaF with 100 parts of wheat flour or 30 g. of white arsenic with .5 l. of wheat flour and enough water to make a paste for the control of silverfish.

The Egyptian Ministry of Agriculture has found that sodium fluoride and sodium fluosilicate control *Calandra oryzae* at 1:3000 and *Tribolium confusum* at 1:1000. Experiments with goats showed that 1.5 g. Na_2SiF_6 is dangerous to a 10 kg. animal and that the lethal dose is from .136-.18 g. per kg. of live weight. Smaller doses cause some injury. A dose of .15 g. per kg. was not lethal to rabbits but .2 g. was usually fatal. A daily dose of .005 g. for 10 days followed by a daily dose of .05 g. was fatal to rabbits in 29 days. Lethal doses of CuCO_3 were .42 g. per kg. and .159 g. per kg. for goats and rabbits, respectively, and for Na_2AsO_4 they were .11 g. per kg. and .05 g. per kg., respectively. An extensive study by Smyth and Smyth on the same subject showed the fluorides to have a much wider margin of safety than do arsenicals and Marcovitch showed that they are 100,000 times safer as to chronic toxicity.

Preliminary Report of the Committee on Uniform Insecticide Terminology

By Dr. Alfred Weed

DURING the discussions at the June meeting of the Association, it was suggested that a committee be appointed to consider the physiological reactions of various insecticides upon the principal insects for whose control they are recommended with a view to agreement on terminology. The result of this suggestion has been the appointment of a committee on uniform insecticide terminology, which has but a preliminary report to make and will welcome suggestions at this time.

You will recall at the past Chicago meeting, that the wish for such a committee and its establishment was largely influenced by claims for exceptional properties of insecticides, which claims cannot be borne out by facts, and which undoubtedly occur in connection with the distribution of insecticides other than fly sprays in the household field. Some of these claims are gross exaggerations, indeed startling, and when applied to pyrethrum fly sprays give them the appearance of a cure-all. Such misleading statements may appear on the packaged goods, in circular material or other advertising media, and in all probabilities are not intentional but made rather through ignorance or over-enthusiasm on the part of the manufacturer or his advertising agency.

Mr. McCormick of the Insecticide Committee has, in his report, brought to your attention some of the phrases which are frequently resorted to and numerous other statements of a doubtful character, have been brought to your committee's attention. Such statements as:—"gases them" or "gases insect pests"—"one whiff suffices"—"kills instantly"—"can be used to spray vegetables, flowers, canary birds and baby chickens"—"disinfects and deodorizes" and numerous other claims referring specifically to fly sprays are at present before us. It is possible that under certain circumstances some of the phrases may be true, but this is doubtful indeed in the light of factual information.

Your committee is charged with the responsibility of determining as accurately as possible from an examination of the literature, and augmented with experiments and scientific facts of such cases. Such findings, when agreed upon, will be made available to the sales and advertising departments of the members of our Association for use if they see fit.

Report of the Disinfectant Committee

By Peter Dougan

IF the outsider was to look at this disinfectant business of ours we think he would consider the cross-word puzzles he has tried to solve simple problems as compared with those problems that face the man who is marketing a disinfectant.

If he said there were very few land marks to guide his early efforts he would be right.

In a recent study we took a trade price list that named and gave prices on 54 different disinfectants. The first study was to find the size of package which manufacturers were developing for the household trade.

- 13 listed a $\frac{1}{2}$ gallon size
- 12 listed a quart size
- 9 listed a pint or 16 oz. size
- 6 listed a 8 oz. size
- 5 listed a 1 oz. size
- 2 listed a 4 oz. size

and then there was a listing of one each for the $\frac{1}{2}$ oz., 2 oz., 3 oz., 6 oz., 10 oz., 12 oz., and 40 oz. sizes. This showed that manufacturers were marketing 13 different sizes.

The next study was to consider what the manufacturers considered to be the price to consumers, which had the biggest appeal—

- 19 had a \$.25 package
- 15 had a .50 package
- 10 had a 1.00 package
- 9 had a .35 package
- 9 had a .60 package
- 6 had a .10 package
- 4 had a .75 package
- 3 had a .40 package
- 2 had a .90 package
- 1 had a .65 package

So, apparently, if this checking means anything the priced package that these manufacturers consider will sell the best to householders in the order of popularity is the 25c, the 50c and the \$1.00 size.

In the matter of trade discounts made to the storekeeper the variations were equally puzzling. Taking only those instances where the price list gave the price to consumer and then the price to the retail dealer, we had 95 different prices to serve in arriving at these figures:

- 49 quoted 33 $\frac{1}{3}$ % discount
- 9 quoted 25% discount
- 5 quoted 40% discount
- 4 quoted 42% discount
- 4 quoted 45% discount
- 3 quoted 38% discount
- 3 quoted 30% discount
- 2 quoted 55% discount
- 2 quoted 60% discount
- 1 quoted 12 $\frac{1}{2}$ % discount
- 1 quoted 15% discount
- 1 quoted 37% discount
- 1 quoted 75% discount

It was not possible to make a study of discounts allowed to wholesale dealers as the figures were not available.

In the matter of sales through trade channels, and presumably not bought by householders, the price list gave selling prices on 31 brands marketed in one gallon sizes, 2 in five gallon sizes, 2 in ten gallon tins, and one manufacturer had listed the retail dealers price per gallon for barrels.

The prices named ran from 40c a gallon to 45c-50c and \$1.00, \$1.25, \$1.50, \$1.75, \$1.95, \$2.00, \$2.50 and three were listed at \$3.00 a gallon.

Except for remarking on the wide difference of opinion that exists among manufacturers as to the price their disinfectants can be sold to consumers, we will have to leave it to each one to draw his own conclusions from the figures these tables show. It is apparent, however, that a showing such as this may be the cause of many persons entering into the field to sell disinfectants and sharpening competition.

This list of 54 trade named products of course represents only a percentage of those who are selling disinfectants but it serves

the purpose of indicating how widely different the views of manufacturers differ from one another.

In the matter of advertising and increasing the outlets for the sale and use of disinfectants no striking campaigns seem to be in progress just at present yet basically it is self evident that only part of the battle of selling goods has been won when the dealer puts the disinfectant in stock. So far as can be learned, the ways in which the consumer is brought to buy a disinfectant is by the use of circulars to be distributed by the retailer and calculated to help the dealer who by personal effort pushes the sale of the disinfectant, some display cards for his windows or counters, the use of special advertising letters sent by mail to a list of names furnished by the dealer.

In advertising circles while this kind of advertising is given a value, it is claimed that the results are far below those that would be accomplished by other forms and means of advertising. Whether that broad advertising should be in the newspapers, or magazines or car cards; posters or billboards, and what kind of copy should be used awaits some one who has a bit of courage to spend the money and find out.

At the present time current issues are calling attention to reform movements in regard to Trade Marks.

In view of the fact that the manufacturer looks upon the trade marks or trade names which have been adopted as a part of his capital, the committee feels justified in calling your attention to the efforts which are being made to compel the registration of all new trade names, and again to the Vestal Bill which has been introduced in Congress for a revision and consolidation of the Federal laws designed to protect "Trade Marks."

As an example of the need for the compulsory registration of Trade Names the advocates for this point out cases where a manufacturer after developing the market for his "Trade Mark" or "Trade Name" receives word from some obscure concern alleging that the name, or a similar one to the one he is using is an infringement. Attorneys upon investigation find that the complainant has a perfectly good common law trade mark and the only remedy is to purchase the common law trade mark or else for the manufacturer to change the name of his product.

The fact that the party claiming infringement has delayed several years before making its claim does not destroy its rights. Even non-use of the name will not give you a good case unless you can prove this in court and the burden of proof of abandonment is upon the party alleging it. Therefore, it is argued, Trade Mark registration should be made compulsory and if this is not done that negligence ought to put one out of court.

The "Common Law Trade Mark" was ended in Canada September, 1932. The Canadian Law now requires that the user of a Trade Mark must register it within six months of the first use, or lose his rights to an innocent claimant who does obtain registration.

As to the Vestal Bill, this was passed by the last Congress but failed of attention in the Senate. This Bill has brought to a head the efforts of those who seek to reform our Trade Mark Laws. The matter has been the subject of study by the Patent Committee of the House of Representatives and already the committee has thrown overboard the hampering doctrine that Congress has the power to legislate against Trade Mark procedure but has not the authority to create new rights in Trade Marks as distinguished from mere rights in Trade Mark registration.

The new idea has it that Congress has authority to protect any mark, not a trade mark at common law that is used in interstate and foreign commerce. In view of the capital rights which our members have in their Trade Names and Trade Marks, this committee believes that it is to our interest, through a proper committee, to participate in the proceedings that have been started for a revision of the Trade Mark Laws.

Sweeping Compounds:

In view of new proposed specifications for Sweeping Compounds issued by the Bureau of Standards as reviewed in the October issue of SOAP it seems desirable that our members marketing such products should now bring forward their criticisms and suggestions.

The proposed specifications cover—

- Type and Materials
- Detail requirements
- Methods of sampling, inspection and tests
- Packaging, Packing and Marketing

Suggested revisions are to be made to—

Mr. F. W. Smither, Technical Committee on Miscellaneous Chemical Products
Federal Specifications Board,
Washington, D. C.

Compound Solution Cresol, U. S. P., Cresol U. S. P., and Special Cresols

On September 6th, the Secretary asked for information on certain modifications in the preparation of Liquor Cresolis Compositus covering the question of substituting Coconut Oil for Linseed Oil in whole or in part and also if under the specifications named the effect on the cost of manufacture, its saponification, lightening the color of the product and if the product would be readily soluble in cold water.

Perhaps this information can be given at this meeting and the question might be discussed here.

The cresol type of disinfectants called either Compound Solution Cresol U.S.P. (Liquor Cresolis Compositus) or Solution of Cresol or some branded trade name, have been under the severest price competition of any grade.

The Committee has recently reviewed the status of these products for there is the probability that with the prices so abnormally low, the cresol disinfectants may become so cheap as to lose a great deal of their market salability.

The situation now is that manufacturers who value reputation and believed that the Government meant what it said when they declared that a product labelled as Compound Solution Cresol would be checked by the U.S.P. specifications and declared misbranded if it did not conform to the standards of the Pharmacopoeia have suffered a loss of business to those products which did not conform to the U.S.P. specifications. Primarily, the trouble starts with the manufacturer of a product calling on the Tar Acid Manufacturers to give him cresols at lower prices and the Distiller looking for orders has met the demand for lower price cresols by supplying what he calls "Special" Cresols.

Some committee men have expressed the opinion that Cresol U.S.P. and Special Cresols are the same thing in which case the difference in price between them is only a subterfuge by which the distiller can name a price low enough to get the business. However, there are some of us who by testing the two grades have found that there is a difference between them.

As a constructive measure one would think that the distillers in order to protect an outlet for the Cresols U.S.P. would apply the remedy and believing that a standard such as the U.S.P. should be recognized and supported, we think our Association should express to the Tar Acid manufacturers that in our opinion, where a buyer is purchasing Cresol for the making of the Compound Solution Cresol U.S.P. that he be quoted a price and supplied with Cresol U.S.P. only.

It is to the interest of the Tar Acid Manufacturers and the makers of the Compound Solution Cresol U.S.P. to sustain the Pharmacopoeia. At this meeting it is hoped that the members will speak freely of their views regarding the F.D.A. (Food and Drug Administration) co-efficient method of test. At the present time there are in use co-efficients as determined by the Rideal-Walker Method, the Hygienic Laboratory Method, the Reddish Method and the F.D.A. Method.

It is expensive for manufacturers to test their disinfectants by different methods. It is confusing to buyers and they cannot be expected to know, nor do they in the final analysis appreciate the finer meanings of these different tests. Heretofore, when this question has been spoken of there has been a heated disagreement among us, but it seems now that with an agreement among us to specify the co-efficient on Tar and Pine Oil disinfectants on every package and if possible make it a requirement, to do so under the law that the present is the proper time for the members of the National Insecticide and Disinfectant Manufacturers to adopt one method which would be sanctioned by all members.

This view, I might say is agreed to by all members of the Disinfectant Committee, except one. The member who is the exception doesn't believe anything will be gained but controversy and believes that for the present at least, that we should avoid making any other than a general suggestion on the point.

Another constructive suggestion that is offered for discussion is the problem of establishing a better and closer contact with Health Councils of the different States and larger Cities.

The State of New York has recently published their Sanitary

Code revised to July 1, 1932 and giving Special Administrative Rules and Regulations. In certain parts the use of a disinfectant is required. However, it is not specified what disinfectant material is to be used.

Disinfectants can accomplish an important service for the benefit of the public health in controlling epidemics, preventing the spread of different communicable diseases and raising the standard of hygienic cleanliness.

In this work the Committee feels that after a study of the principal sanitary codes, there will be found parts which will serve as a starting point for agreement with Health Officials and perhaps a good use can be made of the definitions which were prepared by the Committee on Nomenclature under a grant made by this Association.

Report of Committee on Standardization of Disinfectants

By Dr. William Dreyfus

At our Mid-Summer Meeting in Chicago my report discussed Circular No. 198 United States Department of Agriculture entitled: "United States Food and Drug Administration Methods of Testing Antiseptics and Disinfectants, By G. L. A. Ruehle, Senior Bacteriologist, and C. M. Brewer, Associate Bacteriologist, Insecticide Control, Food and Drug Administration," which circular is the first authentic publication by the United States Department of Agriculture describing the methods used in the examination of antiseptics, germicides or disinfectants in the enforcement of the Insecticide Act of 1910. This most detailed and scientific publication is of enormous value in guiding us to correctly comply with the provisions of the Insecticide Act either in its present form or with the proposed amendments which our Legislative Committee, appointed at Chicago Meeting, has now under consideration and which let us hope will speedily be enacted into law with slight minor changes.

As Chairman of the Committee on Standardization of Disinfectants I feel it my duty to bring to your attention, not only such information referring to new developments in standard bacteriological methods essential to our industry, but also practical information gathered from the field, relating to products sold as germicides and disinfectants in the open market, the criticism of which based on a complete chemical and bacteriological investigation might prove of interest to some of you.

A typical illustration is the following case, where in the early Spring one of the Pacific Coast branch offices of my company sent me an original package of an odorless liquid germicide sold in their market with claims on the label to possess a phenol coefficient of 500, no method specified, but failing to state any directions for use.

The bacteriological reports by our consultants, the Pease Laboratories, showed this product to possess a Phenol Coefficient of 311 by the Hygienic Laboratory Phenol Coefficient Method and when tested by the same method in presence of organic matter consisting of 2% pepton and 1% gelatine, the coefficient was reduced to 5.28 or in other words lost 98% of its original value. In comparison of using two different standard methods on this type of compound we found when tested by the F. D. A. Method against *E. Typhi* this product showed a phenol coefficient of 300 and when tested with the addition of organic matter using 2% Pepton and 1% Gelatine the coefficient was reduced to 100 or a loss of 67% of its original value. It will be noted that the results obtained by the Hygienic Laboratory Phenol Coefficient Method and by the F. D. A. Method both against *B. Typhosus* check very closely without organic matter, whereas in the presence of organic matter the loss of efficiency by the Hygienic Laboratory Phenol Coefficient Method is greater.

The same sample of germicide when tested by the F. D. A. Method against *Staphylococcus Aureus* (I. B.) at a medication temperature of 20° C showed a phenol coefficient of 23.3, and when tested by the same Method against the same organism in the presence of organic matter consisting of 2% Pepton and 1% Gelatine, the coefficient was reduced to 4.1 showing a loss of 82% of its original *S. Aureus* efficiency.

A qualitative and quantitative chemical analysis revealed that this product consists essentially of a solution of mercuric iodide, and potassium iodide, colored with a fluorescent dye-stuff. Be-

sides the instability of this compound against both organisms, *B. Typhosus* and *Staphylococcus Aureus* in the presence of organic matter, this type of germicidal agents is not suitable for practical work on account of its high toxicity, being a mercury compound, and its lack of cleansing properties, a missing essential feature for a practical disinfectant.

However, there is a group of phenolic compounds, either chlorinated or not, under my investigation at present, which promises to lend itself very suitable in the manufacture of an efficient, stable and practical odorless disinfectant and germicide at a most reasonable cost, but the research work is not yet complete enough for discussion.

As further topic of possible interest some of our members may be marketing liquid soaps for which germicidal and antiseptic properties are claimed and which are used quite extensively by hospitals to disinfect the surgeons' hands and for other similar purposes. I have examined a number of such liquid soaps but failed to find a single one that would meet the Drug Control Germicidal Test, outlined in Circular No. 198 of the United States Department of Agriculture referred to above. Let me advise you that there is quite a market for a true germicidal liquid soap, but such soaps must kill *Staphylococcus Aureus* at a medication temperature of 20° C in less than five minutes to comply with the Drug Control Standard and to be labeled as germicidal liquid soap.

Comments on Dr. Dreyfus's report by Dr. Emil Klarman: Dr. Dreyfus's report contains one interesting point which deserves our attention particularly and that is the observation which he reports in reference to the fallacy of phenol coefficient declarations in conjunction with disinfectants whose efficacy should not be expressed in these terms. He gives the example of potassium mercuric iodide with a staggering phenol coefficient which when tested under conditions more commensurate with practice—that is, the presence of organic matter—is found to be extremely weak and inefficient.

I know of no other example which like this brings home so forcibly the necessity of proceeding in a rational way in expressing the germicidal efficacy of disinfectants.

We know that there are quite a number of substances which show anti-bacterial action. Among them there is the very large group of tar oil disinfectants, tar acids, heavy metal compounds, dyes, organic acids, and so forth and so on. To be sure, all of them have some merit as destroyers of bacterial life. But it is entirely inadmissible to use the phenol coefficient as a yardstick in expressing germicidal efficacy of a compound which has no chemical or other relation to phenol.

Incidentally, it will be of interest perhaps to say that this potassium mercuric iodide is nothing new. It is something that has been in existence for a great many years. But it seems to bob up repeatedly. Apparently the person who works on this particular subject does not realize that he has something very old in his hands and thinks he has made a great discovery and brings it to the attention of a manufacturer and tries to build a business on its basis.

I believe that this experience should furnish food for thought not only to the Disinfectant Standardization Committee but also to the Committee headed by Mr. Dougan whose task it should be not only to discourage the expression of bactericidal efficacy in terms of phenol coefficient in the case of compounds which are not phenol derivatives, but to make such procedure entirely impossible.

While we are on the subject of misleading claims I might perhaps add another illustration of something which has been bothering me right along and I simply don't know how to get around it.

There are products in existence which, to be sure, are decidedly meritorious as germicidal agents. They have been introduced into the market comparatively recently. I won't mention names. But the method used in creating publicity for these products is this:

Let us assume that somebody discovers a potent germicide for which, for the sake of illustration, let us say a phenol coefficient of 100 is found. Now, for either technical or economic reasons, the preparation with a phenol coefficient of 100 cannot be marketed as such. It is therefore brought in solution, let us say, in a 100 per cent. concentration, and the statement will be found on the label, and quite truthfully, that the active principal of this

preparation is 100 times more potent than carbolic acid. The manufacturer may even go so far as to say that this preparation is a one per cent. solution of this compound.

But I made it a point to find out how many people who buy a preparation of this sort actually sit down with pencil and paper and figure out what the germicidal efficacy of the product is as they buy it, because that is not stated. Dilutions are given in which it is effective. I might say that these dilutions may be quite in agreement with requirements of the F. D. A. testing procedure.

But it seems to me that if a preparation of this sort gets into the hands of somebody who is not very familiar with the field of antiseptics the person is apt to be misled in regard to the efficacy of the product. This is not merely an opinion. It is a fact. I made it a point of inquiring among a number of physicians who I know had used such preparations and when they said yes I asked them what they thought of it and invariably I heard that it was really remarkable to get a product that is 100 times more potent than carbolic acid and yet is not toxic.

I think there are two ways of presenting the facts as to the product on the label. It is possible to do it truthfully so that there is no chance of a misconception being created in the mind of the reader of the label, but it is also possible to do it truthfully, to be sure, but so that the reader is confused and is not able to form a clear opinion as to the real comparative merit of the preparation.

To give a simple example, if anybody would sell a one per cent. solution of liquid cresolis compositis he might be able to show on the label that the active principal of this preparation is two or three times more potent than carbolic acid, but this is of no importance for the practical application of the product because the person who uses it should know what the actual value of the product is as he buys it, not how many more times stronger than phenol the active principal is.

I might say that this would perhaps be an interesting point to consider also by Mr. Dougan's Committee that is working on statements in reference to the germicidal potency of anti-bacterial agents and that this would be a useful addition to the work of this Committee.

Report of Scientific Committee

By Dr. G. F. Reddish

AT the last mid-summer meeting of the Association the Scientific Committee gave an outline of its proposed activities for the immediate future and also suggested a program of work which will extend over a longer period of time. We have assumed as part of our duties a continued interest in nomenclature and, as time goes on, study of certain technical terms generally used in the insecticide and disinfectant industries. We have also taken upon ourselves the task of reviewing publications relating to insecticides and disinfectants with the idea of correcting, if possible, damaging misstatements. This committee has also promised to keep the Association informed of advances made in the fields of insecticides and disinfectants from year to year.

Our recent experience with the work on nomenclature has convinced us that the aid of a competent lexicographer must be had if work of this nature is to be of value. We are not convinced as yet that the need for study of technical terms is sufficient to justify securing the cooperation of such a man and for this reason no work was attempted in this field during the past year. The committee feels that if such a need arises we should secure the cooperation of a man such as Dr. Patterson, and we also feel that such an investigation had best not be attempted without such expert assistance.

Our committee during the past six months has made serious effort to review publications relating to insecticides and disinfectants from a critical point of view with the idea of bringing about correction of misstatements. We have made a study of twenty-eight bulletins obtained from the Department of Agriculture in Washington, twenty of which deal with insecticides and eight of which are concerned with disinfectants and disinfection. A list of these bulletins is attached to this report. A careful study of the bulletins relating to insecticides and insect control reveals nothing which we consider subject to revision because of untrue statements of such a serious nature as to be damaging to the industry. The bulletin on insect powder mentions certain

weaknesses of pyrethrum powder, but at the same time gives it credit for its virtues as an insecticide. It is an impartial publication, and the statements contained in it seem fair. A bulletin published in 1918 describes methods for testing insecticides against bedbugs, cockroaches, etc., and is considerably out of date. However, it can be ignored because it is an old bulletin and probably little read at this time. Certain bulletins give directions for making insecticides in the home or on the farm, but since the finished product will probably be effective if made right, we see no reason for being critical. Little or nothing could be done about it since this represents an effort on the part of the Department of Agriculture to aid the farmer in securing an insecticide as cheaply as possible. Any criticism of this general policy would hardly be effective in bringing about any change in this respect. After reviewing these bulletins on insecticides we have no suggestions to make relative to correcting statements in them.

Some of the bulletins relating to disinfectants could be revised and brought up to date, and some of them contain statements which are not in keeping with present day knowledge of the subject. Such statements are so obviously in need of revision that we are sure they would be corrected by the respective authors should they rewrite these bulletins. We are not in a position to ask an author to rewrite a bulletin just because it contains statements which are not in keeping with present day knowledge. We cannot suggest that these publications be recalled for the same reason. Some of these bulletins will never be revised, but entirely new publications will supplant them, in which the corrections we desire would then be made by the author without suggestions from us. As in the case of the insecticide bulletins, we do not feel that we can be instrumental in bringing about revision of any of these bulletins simply because they contain statements which are not up to date.

The committee has also considered other publications and bulletins from agricultural schools which have been brought to our attention by members of the Association. In no case were we able to make an attempt to correct statements which seemed in need of correction for the above reasons. However, the committee will continue to keep in touch with the literature and will, wherever possible, lend its assistance in keeping the literature as free from untrue statements as possible.

For the past few years, Dr. Klarmann has kept the Association in touch with progress made in the disinfectant field from year to year. As a member of the Scientific Committee Dr. Klarmann will continue this activity. Dr. Peet has agreed to perform a similar service with the literature on insecticides, and will report each year on the advances made in this field during each preceding year. These two reports will constitute an important part of the Scientific Committee report. Dr. Klarmann and Dr. Peet will at this time present briefly a resume of important advances made in these two fields.

G. F. REDDISH, Chairman,
B. T. WOODWARD,
E. KLARMANN,
C. H. PEET,
L. C. HIMEBAUGH,
B. G. PHILBRICK,
JOHN POWELL.

Report of Liquid Soap Committee

By Dudley J. Bachrach

SOAPMAKERS cannot afford to look too lightly on matters which are of popular knowledge but not yet capable of scientific proof. For instance; good cooks could make a smooth ice cream long before the scientist made his study of the action of protective colloids in reducing the size and increasing the stability of ice crystals. In fact, despite all the increase of knowledge in colloid chemistry and allied fields, ice cream made by a pastry cook would probably still taste better than that made by a chemist.

We now come to the question of olive oil soaps. I know of no real honest-to-goodness scientific reason why these soaps should have an emollient action and be softer on the skin than soaps made of other oils.

Probably in due course, studies will be made of the adsorption phenomena between the surface of the skin and the surrounding

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olive oil soap solution. It may be found that the skin may attract to itself a protective film of olive oil fatty acids and possibly glycerine, yet leave in solution the combined alkali. If this be true, there would be an infinitesimal increase in free alkali during the washing process.

It is even possible that physicochemical research may show that in the case of cocoanut oil soap, the skin adsorbs the lauric, capric and caproic acids, etc. The lower melting hydrocarbon acids are certainly more irritating than the higher melting. Ask those who ever had some vinegar poured on their skin. Needless to say, acetic acid is the active constituent of vinegar and is one of the lowest boiling of the hydrocarbon acids. Thus the chapping, due to cocoanut oil soaps, may ultimately be found to have not as much relation to hydrolysis of the soap solution as had been previously considered. The adsorption effect of the skin on the acids may be of importance also.

There is a direct application of the above discussion to liquid soap. Every winter, especially, sometimes in other seasons, liquid soap manufacturers have to deal with a few complaints on chapping. Cocoanut oil liquid soap, although it gives a wonderful lather, has this effect on a small percentage of people with tender skin. When these people who complain of chapping were given a mixture of olive oil and cocoanut oil liquid soap, they invariably said "That's fine. No further trouble."

We hear a lot lately about the necessity of selling liquid soap at little or no profit to meet ruinous price competition. If a liquid soap dealer finds difficulty in selling the ordinary cocoanut oil liquid soap on account of too much price competition, he can get on the right side of his customer by selling him a blander mixture of liquid olive oil soap and liquid cocoanut oil soap, and incidentally, justify a higher price for a quality product. He can by this means get some sort of escape from ruthless price competition.

We now have the question of a simple standard for an olive oil cocoanut oil liquid soap. Enough olive oil must be added to produce an appreciable emollient effect, and at the same time enough cocoanut oil must be used to offset the extremely poor lather given by a liquid olive oil soap.

A suggested minimum standard follows:

Liquid Soap—Olive, Cocoanut Oil Type

A mixture of pure potash cocoanut oil soap and pure potash olive oil soap. The olive oil used should be at least as good as the commercial denatured olive oil made by pressing instead of by extraction. The cocoanut oil should be at least as good as cochin type. No caustic soda should be used.

Total anhydrous soapnot less than 17 %

Total solids including glycerine....not less than 18½%

Minimum ratio of olive oil to cocoanut oil.....3 to 4

In conclusion, we cannot help but stress that you cannot wash your hands with specifications alone. Specifications are only of value when they are used as a basis by a skilled soapmaker who combines technical knowledge with the soapmaker's art.

DUDLEY J. BACHRACH
Clifton Chemical Co., Inc.

Report of Trade Ethics Committee

By Dr. Robert C. White

THE report of your Trade Ethics Committee will be brief. There has been no great accomplishment in the year just passed by this committee. Not that there does not exist a very urgent need for such a committee, and their work, but due particularly to the fact that the membership of this Association have deliberately circumscribed the work which might be accomplished so far as maintaining of real ethics in our body is concerned. There is in existence in our association no other committee whose work so entirely depends on the material supplied by the membership as does the Trade Ethics Committee.

At our annual and mid-summer conventions, and frequently by casual letters between, a number of our members make complaints as to the partial or total disregard of ethics by our own members, and by outsiders; and yet in the rarest of cases has it been possible for your present committee to obtain in writing any charges of unethical conduct, or any tangible evidence proving the existence of the same. As has been pointed out before,

this committee under the most favorable circumstances occupies an unenviable position in the industry; to act as censors, or dictators regarding trade policies of others, is at best an unpleasant task fraught with the danger of grave misunderstanding.

That we have received a very few complaints is true, and these have been acted upon with the greatest discretion possible, as can be readily understood. Such matters of criticism cannot be broadcast, and such judgment on others as is passed must be not only in absolutely honest fashion, but must be without any prejudice whatever. Complaints are frequently received regarding misstatements in labeling; yet on request no such labels, or material can be obtained from the claimant. Misbranding and inferior articles have at infrequent times been called to your committee's attention, yet upon direct request such samples of misbranding, and products, are non-obtainable. In other words, gentlemen, it is the firm conviction of your committee that we have in our midst practically no members who are willing to stand out, and take such criticism as might come to them should it become known that they were the disclosers of unfair trade practices. That unsupported gossip regarding improper products, and improper labels exist we must all agree, but until our members are willing to support their convictions, it will continue to be impossible for your committee to accomplish much.

The foregoing might indicate that nothing whatever has been accomplished by the committee. This is not the case. In a number of cases misbranded products have been called to the attention of the manufacturers, not only in our association, but outside of its membership, with the results in all cases that corrections have been made. Unethical circulars have been given consideration, and some statements have been withdrawn. In one case a manufacturer made claims which could by no means be substantiated. After this had been forcibly called to his attention he withdrew the statements criticized rather than have this matter carried to Washington. In another circular a very reputable firm of Chemists had been outrageously misquoted, and misrepresented. A visit to these chemists showed, after discussion, that they had been imposed upon, and they themselves withdrew their supporting statements from the manufacturer publishing their reports.

In all, since last January thirty-seven cases have received consideration, with satisfactory conclusions in thirty-four. A most notable thing is the great fear these people have for publicity. All of them are apparently willing to talk if assured that their conversations, and correspondence are held in strict confidence. Your committee has at no time violated this agreement. This fact in itself should appeal to our members, and give them to realize that publicity is the great lever with which we can pry manufacturers away from unethical dealings. In short if our members were sincere in their complaints, and would give us sufficient evidence to make public these particulars we could clean them up in practically all cases.

In conclusion may we again call to your attention the fact that the results obtained by your Trade Ethics Committee will be in direct ratio to the support you give them, and if unfair practices are not stamped out it will be largely the fault of the membership, from failure to support the structure set up by your Association for the elimination of unfair trade practices.

SYMPOSIUM ON SELLING

Sell Direct or Through Jobbers?

By Henry A. Nelson

Vice President, Chemical Supply Company

THE question of whether to sell direct to the consumer, or whether to sell to the jobbing trade only is one which almost every manufacturer in the disinfectant field has been asking himself. It is not a question which can be answered at random or by the industry as a whole, but it is a subject which seems to call for careful consideration and must be solved individually by each manufacturer himself. Nevertheless it may not be amiss to consider some of the factors which may influence the policy to be decided upon.

What Is Meant By Selling Direct

In the disinfectant and sanitary products industry, selling direct is defined as marketing the merchandise to the ultimate consumer

by the manufacturer himself without the aid of dealers, jobbers, brokers, etc. Shipments may be made from conveniently located warehouses or from the factory itself. Sales are made through salesmen, through various forms of direct mail efforts, or through a combination of both methods. When merchandise is sold direct to the consumer, it is usually offered under the trade name established by the manufacturer, instead of being sold by its chemical names. The manufacturer, when selling direct, can obtain higher prices, determine the intensity of his sales efforts, supplement the work of his salesmen in various ways, retain close contact with his customers, design his advertising in a way he deems most resultful, and in general work along lines which he and his organization may determine from time to time. Selling direct, therefore, is something which appeals to an aggressive manufacturer seeking to enlarge his markets, but when serious consideration is given to this method of selling many problems present themselves. If the manufacturer does not have a direct selling organization he must build one, usually at considerable expense. He will find that a larger organization than his present one is required to take care of office details, field supervision of his salesmen becomes necessary, and while his sales prices will be higher, his necessary selling expenses and overhead will increase proportionately. Establishing branch offices, or even utilizing public warehouses, is apt to prove dishearteningly costly during the transformation stage of the business. Yet unless this is done, the manufacturer will find himself at a disadvantage with local companies in the distribution of his merchandise, particularly in connection with small sales where immediate delivery is a vital factor in obtaining the order.

Selling Through Jobbers

When a manufacturer sells through jobbers, his problems are a great deal simpler. But what is meant by "jobbers?" In the disinfectant and sanitary products field the word "jobber" takes on a meaning all its own. Anyone who is engaged in reselling the merchandise is usually considered a jobber. Whether it is a person operating from his home, whether it is an individual with merely desk room in some office building, or whether the investment runs into thousands of dollars, as long as he resells the merchandise he is considered a jobber. All manufacturers in our line seem to interpret the word "jobber" in that manner. The reasonableness of this interpretation, from the manufacturers' standpoint, is proven by the fact that many of the jobbers occupying a worth-while place in the business world today started out by buying their supplies in a small way.

When a manufacturer decides to serve the jobbing trade only, he can, and usually does, devote most of his time to the manufacture and improvement of his products. His main function is to supply his jobbers with dependable merchandise which is sold under the jobber's own name and brand. The manufacturer becomes merely the source of supply for the jobber and loses his identity as far as the consuming public is concerned.

Right at this point is where the danger lies. As long as the jobber continued to handle the manufacturer's products, and concentrated his efforts upon the majority of that manufacturer's lines, everything worked out to mutual satisfaction, and in those days the question of selling direct wasn't even under discussion. As jobbers grew bigger and needed more and more merchandise they decided to manufacture their own goods which by that time had become profitable to them. Again, because of competitive conditions and for other reasons, jobbers began to buy more and more on a price basis, using the quotations from one manufacturer to get lower and lower prices from another. While they still insisted that the manufacturer continue his jobbers policy, they showed little or no cooperation in promoting the sale of the manufacturer's product. Raw material producers in ever increasing numbers, in search of larger sales, began to sell to jobbers direct and to furnish them with formulae and manufacturing processes free of charge. Today we find disinfectants, insecticides, fly sprays, and a host of other sanitary products "manufactured" in basements, sheds, and garages. It is said that in the city of Detroit, Michigan, alone there are over two hundred of such "establishments." All these practices have worked havoc upon the business of the legitimate manufacturer serving the jobber only. Where formerly he supplied many different products to the same jobber, there are only a few items left for which he can find a ready sale now among the jobbing trade—and the sale of his other products is practically at a standstill. He must of neces-

sity be ever on the lookout for people who start in business for themselves, since the business coming from that source and from the smaller jobbers is many times that which he obtains from so called "large customers."

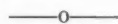
Is it any wonder that the manufacturer is thinking earnestly about selling direct to the consumer? He would much prefer active jobber cooperation and sell his merchandise through that channel. Being human, he too would like to travel the road of least resistance. He is primarily interested in manufacturing processes and surely does not want to undergo the reorganization necessary to enable him to sell direct. Yet, in self protection, he cannot sit idly by, and if jobbers no longer take his entire output, economic conditions will force him to alter his policy.

Selling Through Subsidiaries or Joining Hands With Jobbers

Even if a manufacturer should come to the conclusion that selling direct is advisable, he will wonder whether or not such action will jeopardize his present volume of business from the jobbers. Many jobbers will begin to feel hostile towards him, whether justified or not. That, perhaps, is the principal reason why manufacturers hesitate. But the problem must be solved, and evading the issue will not help anyone. It is of course perfectly legitimate to organize a subsidiary company and this has been done in many instances. Yet this also is often resented by present customers when they learn of the existence of the subsidiary and seems to be only one step ahead of selling direct under the company's own name.

It may well be that the solution of this difficult problem lies in the getting together of jobbers and manufacturers and becoming financially interested in the businesses of each other. Such a policy has been adopted in other lines of endeavor, particularly in the grocery field and in the hardware trade. While this policy presents its own problems, it does seem to lead to closer cooperation between all interested parties and has merit.

What will be the selling policy of the manufacturer now serving the jobbers only? In the last analysis it is the jobbers themselves who will be the determining factor and decide the issue—and that in the very near future.



Sell Direct or Through Jobbers?

By C. C. Baird

President, Baird & McGuire, Inc.

I HAVE been asked to contribute a few thoughts on the question "Shall the Manufacturer Sell Disinfectants and Sanitary Supplies Direct or Only Through the Jobber?" In such a question there are, of course, many angles to consider. Some manufacturers, like the fertilizer people for instance, deal almost exclusively with the consumer, for sales are usually made but once a year and in such quantities that local jobbers are not equipped to handle the business. In many other lines, however, the manufacturer produces an article or a line of specialties which can best be handled and distributed through the jobber, and in all such cases, it is unquestionably best for the manufacturer to confine the sale of his products to local or sectional distributors. I know of any number of cases where the manufacturer has sold not only to jobbers but the consuming trade as well, and in every instance within my memory such a plan has met with failure. The jobbing trade is the natural outlet for the manufacturer. One of the most valuable assets a manufacturer can have is a good line of jobbers. These people, if they are of the right kind, will spend their time, money, and effort to find a profitable market for your merchandise, and if they are given the right kind of cooperation and treatment, will establish a sale for the commodity far in excess of that which the manufacturer could create by direct dealing.

If the manufacturer who has such a line of jobbers selling his product succumbs to the temptation to also sell to consumers, he quickly finds that the jobbers will discontinue his line and take on a competitive line in the sale of which they are assured of fairer treatment. If your product is one that readily lends itself to distribution through jobbers, you will do well to make no sales at retail or direct to consumers, for the news of a break in your sales policy travels like wildfire and your competitors may find a peculiar pleasure in broadcasting the story. It is an

age-old saying that you can't eat your cake and have it, yet that is precisely what some manufacturers are trying to do. The question which is now before us, whether the manufacturer should deal direct or indirectly with the consumer, would probably never have arisen except for the fact that many jobbers have grossly abused their privileges as distributors and caused the manufacturer to wonder whether this type of sales outlet was in reality the best for him to employ. The jobber may in the last analysis be a tremendous asset to the manufacturer or he may prove a great liability. We all know of jobbers, let us say in the disinfected line, who will discard the manufacturer of a quality product to take on a possibly inferior line where the margin of profit is a little higher. Such men apparently believe in traveling along the line of least resistance. Price is their only consideration. By selling at figures which are very close to cost they demoralize the market for the manufacturer who hopes to build up a permanent quality business. It is this sort of dealer who sometimes causes the manufacturer to wonder if he would not be better off to go direct to the consumer.

Experience shows that unprincipled tradesmen drop by the wayside. The unfortunate part of it is that there always seems to be a fresh crop to take their place. Today there are strong indications that manufacturers generally are giving more serious thought to the matter of declining to sell to fly-by-night jobbers and "shingle" jobbers; those jobbers who have no assets aside from the stocks of merchandise which are placed on a consignment basis and which the maker of the articles hopes may be moved quickly. The time seems to be at hand when manufacturers who seriously think of this menace will decline to supply such trade, but will insist upon selective selling; that is, choosing only those jobbers who are well established, rated and have a sense of responsibility, as well as a reputation for fair dealing.

The jobber seems to be a fixed institution in the scheme of distribution, and if the manufacturer will exert his energy toward educating him on the character and outlets of his merchandise, in the end he will find that his distributing problem is solved.

The British manufacturer has long realized the value of the merchant, and it is my understanding that in the Coal Tar business in Great Britain, the distributing of finished products is accomplished almost exclusively by the merchant. The merchant, or distributor as we call him, knows his world trade and can anticipate its possibilities with a broader vision, and so often has the courage to buy from the manufacturer for his own account anticipating business. In Great Britain also, it is often possible to buy from the merchant at lower prices than from the manufacturer because the merchant having this broader view, bought the manufacturer's material when prices were low. This cooperation between the manufacturer and merchant is helpful to both. Where the right relations are established, it is my belief that the manufacturer should strictly abstain from making sales direct to the consumer, for it is apparent that if you are to command the respect, good-will and cooperation of the jobbing trade, you must accord them the protection to which they are entitled. Any other policy is ruinous. It should ever be kept in mind that it is far more difficult to restore confidence once you have lost it than it is to build good-will in the beginning.

The outstanding feature of selling to the wholesale trade is the avoidance of the great number of accounts which would have to be carried in dealing directly with the retailer or consumer. Further than this, direct selling would require a much larger sales force than is necessary to make contact with the wholesale trade, a point which is highly important as a matter of economical distribution.

At a recent meeting of the National Wholesale Druggists' Association, it was stated that the wholesale druggists were of the opinion that the prestige of any line of products sold to the wholesale trade can be maintained, and complete distribution can be better and more economically obtained through the working out of a merchandising policy, using the wholesaler as a distributor on a consignment basis. It is claimed that this secures complete distribution and at the same time saves the manufacturer the cost of selling, distribution, taking credit risks, and collecting or losing from bad accounts. The belief was expressed that the wholesaler is in a better position than ever to render effective, constructive service to the manufacturer.

Mr. George Stanley Robins, a prominent chemical merchant of St. Louis is authority for the statement that the chemical dis-

tributor who handled for the most part, all categories of chemicals appreciates the similarity in the problems of their distribution and through his perspective can see wherein many manufacturers are all at sea in their method of reaching the consumer. Usually, Mr. Robins points out, these floundering producers only stir up the waves, although they sometimes swamp others in the maelstrom of their ignorance. It is logical therefore that the chemical distributors should be the first to seek out the facts that will provide some definite procedure in the marketing of chemicals. The manufacturer is concerned with production, as well as distribution; the distributor has only the problems of distribution. Why should not the distributor be the leader in the study of the subject with which he should be most familiar, in which he is a specialist?

To summarize, I would emphasize the importance of a manufacturer whose logical outlet is through the wholesale trade to confine his sales to jobbers alone and never to attempt to sell the consumer, and to give the jobber the fullest possible cooperation. The right kind of jobbers will always be found ready to "play ball" with the manufacturer who plays the game fairly but the jobber cannot be expected to push or take any interest whatever in a line that is sold under his eyes to the consuming trade as well. Human nature is such that no one likes to buy from his competitor.

Fighting Off-Brand Price-Cut Competition

By Samuel H. Bell

Koppers Products Co.

THE Chairman of the Program Committee has assigned to me for discussion a subject which presents one of the most serious problems to American industry today. We certainly would all like to know a formula to follow in fighting off-brand, price-cutting competition. Surely a group of men who have developed methods of combating the armies of germs and insects, which beset all humanity, should have little difficulty in exterminating so impotent, yet so annoying, a pest as the off-brand, price-cutting competitor.

My conception of off-brand material is a product of an inferior quality offered as a substitute for a recognized standard product. An example of this would be Liquor Cresolis Compositus, U.S.P. made with Cresols or Cresylic Acid not meeting the U.S.P. specifications. When I think of price cutting, I have in mind the selling of commodities drastically below the regular established market price. We should not include the sales of so-called distressed goods, neither should we condemn the manufacturer who, through research and years of careful study, has developed processes or formulas that enable him to sell below the regular established market and yet maintain a fair profit.

During the past two or three years, with nearly all raw materials selling at steadily decreasing prices, which mean lowered costs on finished products, conditions have been favorable for the growth of the price-cutting evil. Many manufacturers, with little business to be had and competition keen, have used their lowered costs as a means of underselling competitors to such an extent that, even with low-priced raw material, no one can make a fair profit, outside the fortunate few who can maintain prices on well-known, trade-marked brands.

Certain other manufacturers, either through ignorance of their costs, or a determination to hold their organizations together, seem satisfied to go along making and selling their products at a loss. They perhaps figure that they can make out all right . . . if they get a sufficient volume of sales. On the other hand, there are many concerns, mostly of questionable standing, who are willing to "cut corners" by adulteration, misrepresentation and substitution to make profits from off-brand or inferior products.

Now as to the best methods to be used in combating the evils of off-brand, price-cutting competition:

1. Make a study of your own business—be sure you are competitive on your purchases—that your manufacturing costs are right and that selling and overhead are in keeping with market conditions.

2. Disregard distressed materials. Except in isolated cases, bankrupt competition should be ignored and allowed to be absorbed by the market.

3. Assist Federal authorities in citing any manufacturer known to be selling off-brand products.

LIQUID SOAP PERFUMES

Odor does help sell soap. Increase the sale of yours by the use of Perfumes that sell on smell and hold that interest to the extent that repeat business is assured.

We Suggest:

Oil Colonial Bouquet. \$6.00 lb.
Oil Rose "N"..... 4.00 "
Oil Cosmo Bouquet... 6.00 "
Oil Lilas Blanc..... 4.50 "
Oil Tipton Bouquet.. 1.85 "
Oil Palma Bouquet... 3.50 "

*One pound to four to five hundred
pounds of liquid soap is ample.
Send for sample.*



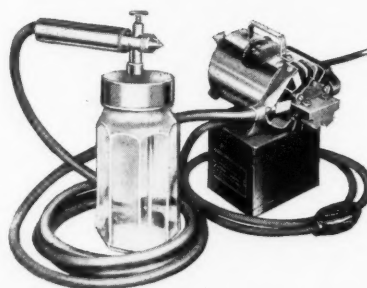
MAGNUS, MABÉE & REYNARD, INC.

ESSENTIAL OILS

AROMATIC CHEMICALS
PERFUME SPECIALTIES

32 CLIFF ST.,
NEW YORK, N. Y.

For Faster, Cheaper Better Spraying



SPRAYIT Model 70

Easy to carry, easy to operate, Sprayit Model 70 applies insecticides, disinfectants and deodorants rapidly, economically and efficiently.

Sprayit Model 70 is a positive pressure type unit and is not to be confused with the older and less efficient blower fan type sprayers. Positive pressure means finer atomization of materials, more rapid application, higher efficiency and general satisfaction. Only the gun is held in the hand, relieving the operator of any strain on arms or fingers. The compressor is carried over the shoulders by means of a comfortable strap or placed on the floor as desired.

Thousands upon thousands of Electric Sprayits are in use throughout the world. Furnish these standard Electric Sprayers to your larger customers and assure yourself that your product will have every opportunity to make good.

Send for Bulletin on Model 70 and other models.

Complete Line of HAND SPRAYERS

Sprayit also offers a complete line of hand sprayers ranging from small tin sprayers that retail at a few cents each to continuous sprayers, compressed air sprayers and other types used for the application of floor oil, etc.

Send for No. 32 catalog.



This is the Sprayit Peerless Sprayer of three (3) quart capacity. A convenient, low priced sprayer for use when high pressure and automatic control are desirable.

SPRAYIT—South Bend, Ind.

Say you saw it in SOAP!

4. Build good will for your own product by intelligent advertising and dependable quality.

5. Educate the Purchasing Agent. A premium can be obtained over off-brand merchandise by intelligent comparison of the variations in quality of the two products. A superior product results in economies and satisfied customers.

6. Before reducing your price to meet a competitor's quotation, be sure your salesman has all the facts. Containers, terms, specifications and f.o.b. points are all important cost factors to a buyer.

7. The intelligent cooperation of the two groups of manufacturers, i.e., those who produce raw materials, and those who make the finished products; all members of our Association, can accomplish much by standardization of testing methods, grading of raw materials, and the publication of information that will enable those who are less acquainted with our products to judge their merits over the so-called off-brand materials.

It is to be expected that no further reductions will be made during this depression on the price of raw materials. In fact there are a number of *increases* for commodities used in our industry, for 1933 delivery. Many Purchasing Agents are attempting to obtain options to renew their contracts for 1934 at the maximum prices named in their present contracts. Assuming that bottom prices have been established on various raw materials used in our industry in the several groups, whether they represent Insecticides, Disinfectants, Liquid Soaps or Deodorizing Materials, we should all cooperate in producing a standardized line of finished products, about which there is no mystery . . . something that buyers can order without fear of receiving an inferior product.

If we do this—consistently and courageously—we will have much less to fear from off-brand, price-cutting competition. And we will be building on solid ground for the day we believe is not far distant, when the Sun of Prosperity will again shine over the length and breadth of our country.

Hiring Salesmen

By S. S. Selig

President, The Selig Co.

IF the two equally important fundamentals that enter into the structure of business, that of providing quality material, and that of providing an avenue for its disposal, I am going to touch briefly on the latter, insofar as my experience has profited me in arriving at the best methods of Hiring Salesmen. I am going to skip the subject of their selection and assume that the picking of the right material and their proper training is an accepted condition.

(a) Commission vs. Salary Basis

It is evident that no one has yet discovered a common sales compensation plan that will fit all factors in sales work. There will always be a great variety of compensation plans just as there are a great variety of businesses. The straight salary plan and the straight commission plan are the basic plans from which all others stem.

Salary and commission on sales over a certain amount or quota means, as its name implies, that the salesman gets a straight salary and then draws his commission on those sales that go over his quota or over a definite amount set in advance.

Another modification is that of salary and percentage of saving. Here each salesman is given a sales quota for his territory and at the same time is given a sales budget based on an analysis of the cost of covering his territory in the past and a prediction of the amount of his current expenses based on that analysis and a study of current conditions. A percentage figure is then determined to cover the expenses of the salesman's territory. By increasing his sales or reducing his expenses or both, the salesman achieves extra rewards.

While I believe most salesmen prefer the salary plan as it gives them a fixed income with which to meet their obligations, this arrangement, due to the tightened business conditions prevailing in the past three years, is being supplanted more and more by various forms or phases of the commission basis.

There are various types of commission plans. The simplest is the straight commission plan which means paying the salesman a predetermined commission on a sale. Next comes the sliding commission plan by which the salesman is paid a given percent-

age up to a certain point, after which the size of the commission automatically increases or decreases as further sales totals are reached. The group commission plan means that the manufacturer's merchandise is divided into groups, and each group carries a different percent of commission for the salesman.

The trend toward commission compensation is daily becoming more accentuated, and it is my opinion that this method, having now become quite well established, will obtain even when better times return, because in essence, it is fair to both parties, giving the salesman adequate compensation when he produces and protecting the house when he is ineffectual.

(b) Reasonable Number of Calls per Day

A question that we often have up for consideration is the reasonable number of calls per day that should be made by a salesman. Salesmen have a tendency to call too often and to spend too much time with customers and prospects who greet them cheerfully and willingly give them a hearing. On the other hand those customers and prospects who are harder to crack and who put up more sales resistance to our men, are not called upon as frequently as they should be. The only way that I know to cure this condition is for the sales manager to maintain a very complete and up to date card index of all customers and prospects and have him get out frequently enough into the various territories so that he himself will know what is what and will be able to judge whether his salesmen are calling on the right folks the right number of times in the course of a year.

Some one has said "When you are looking for a needle in a haystack you have got to move a lot of hay, bit by bit." To my mind a salesman who is going to get a satisfactory amount of business today has got to cover a lot of territory and do it in a very systematic way. It is difficult to lay down any rule of thumb as to how many calls a salesman should make each day. It all depends on whether he is doing an introductory job on a product or making follow-up calls. It depends on whether he is calling on jobbers or is a detail man for a manufacturer. And it depends on whether he is actually doing merchandising work among the dealers, putting up displays and that sort of thing or not. Despite the depression we feel that the ratio between the number of calls and the number of sales made each day remains fairly constant year in and year out. The number of calls may range from one or two a day to as high as 20 or 40 calls a day. If a salesman has a technical product to handle and has to give thorough detailed explanation, why obviously each call will take longer and he isn't going to make as many calls a day as he would if the proposition were something entirely different.

One of the most capable sales managers said some time ago, "Selling is simply walking and talking." We all agree that the more a salesman gets around and the more convincing manner in which he tells his sales story, the more orders he will get. The law of averages is something that can actually be depended upon to help out. I have always thought in our line that a man ought to make from 12 to 15 calls a day to do a good sales job, but here again we must consider the all-important matter of the accessibility of the customer or the prospect. By this I mean how long a salesman may have to wait in the ante-room to see the buyer or the condition of routes getting from one town to another, or the train schedules, etc. Then too, it makes a difference whether a man is working in a large metropolitan center or hitting the small towns en route.

I believe if all of us would devote some time to the proper preparation of a standard sales presentation that we would save our salesmen a great deal of time. I don't mean by this that every salesman should become merely a talking machine record and say the same thing to everybody. That would destroy individuality. But I do mean that if we gave a salesman all of the outstanding points on each product as a sort of guide, we could be a bit surer that he would cover all of the essential ground and cover it quicker. And I believe we would eliminate a danger which today exists in the salesman who makes too many calls, rushes through each sales talk and therefore gets smaller orders each place than he ought to be getting.

(c) Can same salesman call on retailers and wholesalers effectively?

It is very hard for me to answer in any general way the question, "Can the same salesman call on both retailers and wholesalers effectively?" It all depends on the individual man.

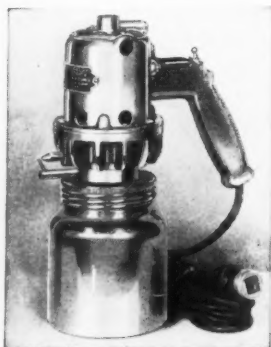
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Increase The Sale Of Your Products With Breuer's TORNADO Electric Sprayers

You can increase the sale of your insecticides by supplying your customers with the proper method of application.

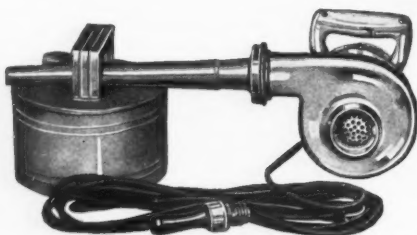
TORNADO Electric Sprayers lead the field. Thousands in use. New developments and improvements in design and construction place TORNADO Sprayers far in advance of out-of-date methods, insuring satisfactory application and encouraging the more frequent use of your product.

There is no line so complete or that embodies so many exclusive and modern features of sprayer design and operation. Three models—see illustrations and descriptions below.



Model 53 new Compressor Type unit. Will break insecticide into finest mist and gas formation mechanically obtainable. Floats throughout spraying area for many minutes—a truly de luxe model! $\frac{1}{8}$ H.P. G.E. Universal Motor. 1 quart metal container. 20' of rubber covered cable.

Model 50 Fan Type unit. A fine insecticide atomizer. Sprays distance of 8' to 10'. $\frac{1}{8}$ H.P. G.E. Universal Motor, 1 pint glass jar. 20' of rubber covered cable.



Model 6 Fan Type unit. Will break insecticide into a very fine mist. Sprays 18' to 20'. $\frac{1}{2}$ H.P. G.E. Universal Motor, Norma Ball Bearings, 1 gallon metal container. This model is for larger institutions, warehouses, industrials, etc., and is also highly recommended for moth-proofing solutions.

Write today for complete description and circulars.

BREUER ELECTRIC MFG. CO.
862 Blackhawk St. Chicago, Ill.

REILLY

Coal Tar PRODUCTS
Carbon PRODUCTS
Chemicals

CRESYLIC ACID CRESOL CRESOL U. S. P. XYLENOL TAR ACID OILS

-- and other
Coal Tar Chemi-
cals for the

SOAP and DISINFECTANT INDUSTRY

REILLY

CHEMICAL CO., Inc.

Merchants Bank Bldg.

INDIANAPOLIS

Say you saw it in SOAP!

Form Sanitary Products Division

Quaker Chemical Products Corp., Conshohocken, Pa., manufacturers of sulfonated oils and other specialties for the textile, leather and metal industries, have formed a separate department to manufacture a varied line of soaps and sanitary products, according to an announcement from D. J. Benoliel, general manager. The line includes potash and soda soaps, sulfonated oil bases, self polishing waxes, metal polishes, disinfectants and other allied materials. Sales will be primarily through responsible individuals who are prepared to go into business for themselves and merchandise the firm's entire line in a given territory. Quaker Chemical Products Corp. was organized in October, 1930, and absorbed Quaker Oil Products Corp. in January, 1931. The latter concern had been in business since 1919.

Wilhelm Lubrication Co., St. Paul, makers of "Dairyman's Fly-Kil" and "Killo-Spray," recently completed plans for an advertising campaign in a series of farm journals. Olmsted-Hewitt, Inc., South Minneapolis, are advertising agents for the insecticide company.

John Powell & Co., New York, specialists in pyrethrum, announce the addition to their staff of Dr. Mortimer D. Leonard, formerly entomologist for Porto Rico and State entomologist for New York.

Propose Model Fumigation Law

A model law covering the regulation of fumigation has been drafted by Dr. C. L. Williams, Senior Surgeon of the United States Public Health Service, and sent out to various interested parties for comments and criticisms from the office of Dr. Carroll Fox, Medical Officer in Charge, U. S. Quarantine Station, Rosebank, Staten Island, N. Y. Additional proposed regulations covering extermination by methods other than fumigation will be drawn up later. The proposed fumigation law requires the usual permits and licenses after examination and entails restrictions on methods of doing the work with poisonous gases, etc. It also calls for public liability insurance before a permit may be issued to a fumigator. Copies of the draft may be secured from Dr. C. L. Williams, U. S. Public Health Service, Rosebank, Staten Island, N. Y.

The Crown Chemical Company, 1539 W. Wells St., Milwaukee, is preparing to manufacture insecticides, disinfectants and other sanitary products. Hy E. Padway is head of the company.

McCormick & Co. have announced the advancement of C. Leonard Fardwell to the position of general sales manager and Walter M. Davis to the post of sales manager.

for
34
years

Makers of
Coal Tar
Disinfectants
Stock Dips
Pine Oil
Disinfectants
Insecticides
Polishes
Cleansers
Liquid Soaps
Spray Products
Roofing Cements

for the
Wholesale
and
Jobbing
Trades
Only

INSECTICIDES

Prepare for the fall and winter business on household insecticides for use against bed bugs, roaches, silverfish, etc. Here are four products of unusual interest to the jobber and distributor at this season.

LIQUID INSECTICIDE

Sure death to bed bugs and roaches. Will not stain. Non-explosive.

PERFUMED INSECTICIDE

Especially for hotels, apartments, etc. Odor pleasant. Results sure.

PHENOL INSECTICIDE

Low cost. For use in rooming houses, jails, etc. Powerful.

ROACH POWDER

Effective 100% against ants, roaches, etc. Best obtainable.

Also best quality Fly Spray for immediate needs.

Send for samples, prices, etc., and a copy of our new folder containing full information.

CHEMICAL SUPPLY COMPANY
2450 Canal Road **Cleveland, O.**

Established 1898

Say you saw it in SOAP!



Presto Model 102 Spray Gun

Let *Presto* Model 102 Electric Spray Gun

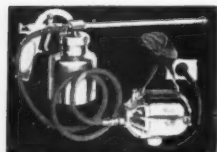
HELP SELL

INSECTICIDES and DISINFECTANTS

CORRECT application of insecticides, disinfectants, deodorants, and moth proofing liquids is quite as important as an effective formula. Make it easy for users to get maximum effectiveness with your products by furnishing or recommending Presto units - the perfected lightweight, easy to use electric sprayers.

Thousands are in use in hospitals, institutions, hotels, poultry houses, greenhouses, stores, dairies, grain mills, for spraying disinfectants, insecticides, and similar products. Presto's speed, convenience, economy and proper atomization are necessary features for large and small users alike.

The new Presto Model 88-94 shoulder strap spraying outfit, with extension nozzle gun and rotary compressor is especially suited to spraying liquid insecticides and disinfectants, in industrial plants, institutions, dairies and for other large users. Presto Model 102 is the convenient general purpose unit for average use. Thousands are in service.



Presto Model 88-94 Shoulder Strap Electric Spraying Unit

Manufacturers and distributors who have tried out Presto units find that this service to users means a substantial increase in sales and profits. Find out how to use this sales stimulator. Get full information on the superior features of construction and operation that make Presto the leading lightweight sprayer units. Check the coupon and mail it now.

METAL SPECIALTIES MFG. CO.
3200 Carroll Ave. at Kedzie Ave.
Chicago, Illinois

Send full details of Presto Insecticide Spray Gun features and sales plan.

Name _____

Address _____

City _____

State _____

LOWELL SPRAYERS

FOR EFFICIENCY!

The effectiveness of your product . . . in the hands of your customers . . . hinges upon the manner in which it is used. With insecticides, the efficiency of the sprayer determines the results.

No. 292 GYPSY



This new type sprayer is particularly adaptable for household use. Its glass container adds to its good looks, an important thing to consider when bidding for the business of Mrs. American Housewife. As to performance, this little sprayer really does a job. Better order a sample today.

No. L4 PUMP



The L4 Pump is a great favorite with leading insecticide manufacturers who want to make it convenient for the housewife to get into the habit of using their products. This pump fits a standard can thread, and may be furnished with any length syphon tube. Offers a splendid means of introducing a new product to the trade.

No. 265 NU-DAY



Here is the outstanding household sprayer from the standpoint of efficiency, individuality, and unique design. Its patented drip cup makes the sprayer dripless at any angle. The curved syphon tube enables the sprayer to be operated while held in any position. The large, funnel-shaped opening is another one of its popular features. From the standpoint of results, the No. 265 Nu-Day has no equal.

LOWELL MANUFACTURING CO.
LOWELL, MICH.

Say you saw it in SOAP!

Correcting the Thomas Broadcast

In connection with mentioning the annual convention of the National Association of Insecticide & Disinfectant Manufacturers over the radio, Lowell Thomas stated that the mosquito problem, during the building of the Panama Canal, was solved by the work and products of two or three New York insecticide manufacturers. We are advised by P. J. Walsh of Phinotas Chemical Co., New York, that his company was the only one concerned and that the product used was Phinotas Oil, a mosquito larvaecide.

The annual report of the Committee on Insecticides and Disinfectants of the Drug, Chemical and Allied Section of the New York Board of Trade was recently submitted by a committee composed of John Powell, of John Powell & Co., chairman; W. J. Andree of Sinclair Refining Co., Peter Dougan of Merck & Co., and W. J. Zick of Stanco, Inc. Copies of the report are available from Ray C. Schlotterer, secretary of the Section, 41 Park Row, New York.

Weiner Soap & Chemical Co. has been formed by Irving M. Weiner at 655 Sixth Ave., New York, to handle janitor supplies. The company will manufacture deodorizing blocks, insecticides, and moth fluids and will act as jobbers for soaps, paper products, mops, brooms, and other supplies. Mr. Weiner was formerly connected with the Kranich Soap Co., Brooklyn.

The team representing McCormick & Co. in the Baltimore Drug Trade Bowlers' League was in second place in league standing on December 27, with 28 victories and 14 defeats, closely pressing the Armstrong Cork team, which with 30 wins and 12 losses, was in first place.

Lehn & Fink Products Co. stockholders met December 28 to vote on a proposal to write down the value of the company's trademarks, names, etc., to \$1. They have been carried on the books at \$7,968,539.

T. W. Pease, formerly plant technician for Cleaners Equipment Corp., Kansas City, has joined the American Disinfecting Co., Sedalia, Mo., as sales manager of the dry cleaning division.

Exports of liquid household insecticides from United States during October, 1932, amounted to 249,760 lbs., worth \$80,815, figures for powdered and paste products being 24,935 lbs., worth \$5,683. In October, 1931, totals for both groups were 242,401 lbs. and \$65,739.

Exports of household disinfectants, deodorants, germicides, etc., from United States during October, 1932, amounted to 49,159 lbs., worth \$5,488, as compared with 148,812 lbs., valued at \$21,327, in October, 1931.



The advertisement features a large, dark circular logo at the top with the word "KOPPERS" in white, bold, sans-serif capital letters. Below the logo is a large, rectangular frame containing a list of products in bold, black, sans-serif capital letters: "TAR ACIDS", "CRESOL U.S.P", "CRESYLIC ACID", "98% & 100% • STRAW COLOR", "TAR ACID OILS", "PHENOLS", "NEUTRAL", and "HYDROCARBON OIL". At the bottom of the frame is a dark rectangular box with the text "KOPPERS PRODUCTS COMPANY" in white, bold, sans-serif capital letters, followed by "1249 KOPPERS BUILDING" and "PITTSBURGH, PA." in smaller white, bold, sans-serif capital letters. The entire graphic is decorated with stylized leaf motifs on the sides and bottom.

KOPPERS

TAR ACIDS

CRESOL U.S.P

CRESYLIC ACID

98% & 100% • STRAW COLOR

TAR ACID OILS

PHENOLS

NEUTRAL

HYDROCARBON OIL

KOPPERS

PRODUCTS

COMPANY

1249 KOPPERS BUILDING

PITTSBURGH, PA.

Say you saw it in SOAP!

PYRETHRUM- ROTENONE COMBINATIONS

McCormick & Co., a pioneer in this field, now offer perfected concentrates of Pyrethrum and Rotenone **THAT STAY IN SOLUTION.** The ingredients are scientifically proportioned to give the greatest kill with the greatest economy.

These Pyrethrum-Rotenone Combinations are only available to established manufacturers.



STEAMOL

Another new product!

McCormick & Co. offer a new non-poisonous insecticidal concentrate known as "STEAMOL". It has been developed for, and lends itself especially to, proper dispersion by means of the steam atomizer.

STEAMOL has a high killing efficiency and will produce no obnoxious odors.

Sold in bulk only.

PYRETHRUM PRODUCTS

Prices quoted on carload quantities of whole, granulated, or powdered Pyrethrum having a **GUARANTEED TOXIC CONTENT.**

Write for complete information regarding concentrated oil extracts manufactured under most rigidly controlled methods to insure highest killing power.

Standardized Liquid and Dust Pyrethrum Insecticides

McCORMICK & CO., INC., BALTIMORE, MD.

VOGEL

A substantially constructed sprayer that will stand up under hard usage, priced at a remarkably low figure.



SPRAYERS

Regular hand type, also continuous. Sturdy, well designed. The greatest value for your money in sprayers.

CANS

Standard stock sizes for liquid insecticides and disinfectants. Plain or lithographed. A gross or a carload. The standard insecticide container.

Deodorizing Block Holders Shaker Top Cans for Para

Plain stock types or specially lithographed

WILLIAM VOGEL & BROS., Inc.

37-47 South 9th St.

Brooklyn, N. Y.

Say you saw it in SOAP!

"Fly-Tox" in Receivership

Rex Research, Inc., Toledo, maker of "Fly-Tox" insecticide, has been put into receivership on petition of Kent M. Pope, Kansas City manager and holder of 113 shares of Rex Research stock, and Fred L. Chappell, County attorney, Kalamazoo, Mich., a creditor to the extent of \$4,640. The receiver is J. W. Lyons, 399 Winthrop St., Toledo. The action was taken to conserve the assets of the company and to make possible operation of the organization during the busy Spring months. It is believed that a reorganization of the executive personnel will come in the near future.

Appropriation for Insecticide Enforcement

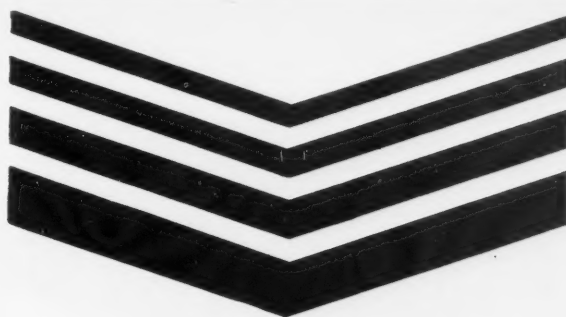
An appropriation of \$195,000 for enforcement of the Insecticide Act during the fiscal year 1934 is carried in the annual Agricultural Department supply bill reported to the House Dec. 22. This is a reduction of \$17,358 under the appropriation for this purpose in the fiscal year 1933, practically all of which is a continuation of the 8 1/3 per cent salary cut handed out to federal employees. In addition to this appropriation the bill carries a number of other items of interest and importance to the insecticide and fungicide industry.

Prevent Light Decomposition of Rotenone

The Bureau of Chemistry and Soils of the Department of Agriculture has just begun an investigation of the possibility of synthesizing rotenone, having concluded its researches on the constitution of that product, according to the annual report of Henry G. Knight, chief of the bureau. It has been found that rotenone-spray deposits are subject to photochemical decomposition, accompanied by considerable loss in toxicity, and that this decomposition may be retarded by admixture of a black material like lampblack.

During the year the bureau has investigated numerous derivatives of rotenone for toxicity to both goldfish and insects, in an effort to find a correlation between structure and toxicity to serve as a guide in developing new and simpler insecticides. Of these derivatives, dihydrorotenone appears most promising, Knight said, in that its toxicity is nearly equal to that of rotenone, and it is inherently more stable toward light. The bureau's study of deguelin, tephrosin, and toxicarol also has led to practically complete determination of their structural formulas, and they have been found closely related to each other and to rotenone.

An insecticidal preparation contains basic ferric arsenites, obtained by heating very dilute ferric salt solutions with arsenic trioxide or salts of arsenic acid. A small amount of alkaloids, for example those obtained from plants of the orders papilionaceae or solonaceae, may also be added. The preparation is effective in protecting ships' hulls from marine pests.—Stahl-Chemie, G.m.b.H. German Patent No. 555,505.



REFINED NAPHTHALENE

PRIME WHITE

*For deodorizing and
moth prevention products*

CHIPPED
CRUSHED
POWDER
CRYSTALS
(sifted)
FLAKES

Factories at

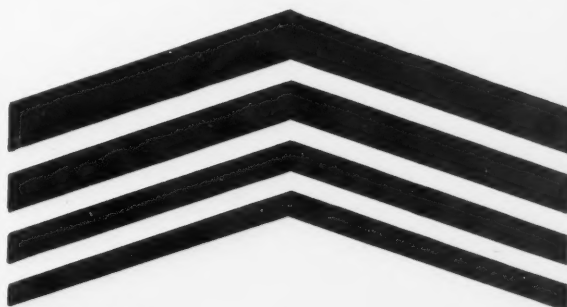
KEARNY·N.J. - CINCINNATI·O.

Send inquiries to

THE WHITE TAR COMPANY

BELLEVILLE PIKE - KEARNY·N.J.

KOPPERS



Say you saw it in SOAP!

A Complete Line of
STANDARDIZED
DERRIS
PRODUCTS

For Fly Sprays

SERRID DOUBLE X

A combination rotenone pyrethrum oil concentrate, that will stay in solution. A decided improvement in this field. Sold on a kill basis, as high as 85%. With this base manufacturers may improve their product and lower their costs.

DERRIS, Inc.
 79 WALL STREET, NEW YORK

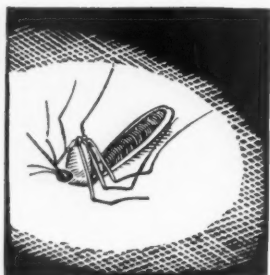
A Complete Line of
STANDARDIZED
DERRIS
PRODUCTS

For Agricultural Sprays

SERRID SUPERSPRAY

A finished concentrated liquid plant spray, sold in bulk for repackaging. Highly effective against mealy bug and red spider. Tested and proven by prominent entomologists.

DERRIS, Inc.
 79 WALL STREET, NEW YORK



The Dependable Insecticide
Stable — Certain — Economical

The conscientious manufacturer hesitates to place his name on a product of uncertain strength and stability. Both raw material and finished product must be dependable.

LETHANE 384

permits the manufacture of insecticides with the absolute assurance that the resulting insecticide will retain its full strength no matter how long it may be kept in storage. You can depend upon Lethane 384.

Röhm & Haas Co., Inc.

222 West Washington Square
 Philadelphia Pennsylvania

Say you saw it in SOAP



New official emblem of the National Association of Insecticide & Disinfectant Manufacturers recently adopted to replace the emblem in use since 1914, necessitated by a change in name. Electros of the new emblem, slightly under one inch square, are available to members at 75c each from the secretary, Harry W. Cole, Holbrook, Mass.

H. W. Hamilton, of the White Tar Co., Pittsburgh, is a newly elected member of the Chemists' Club, New York.

Linn T. Piper has joined O'Cedar Corp., Chicago, as assistant to the president. Mr. Piper was formerly with Roche, Williams & Cunningham, Chicago.

Noxon Chemical Products Co., Newark, polishes, announces the appointment of S. R. Bushnell as assistant sales director.

Jack Joyce, formerly middle west sales manager of Stanco, Inc., resigned this position January 1 to become sales director of Halitosine Co., St. Louis.

S. C. Johnson & Sons, Racine, Wis., have leased 6,500 square feet of space at 601 West 26th Street, New York, as distribution headquarters for the metropolitan area.

John Hawkins, for many years chief chemist and perfumer for Furst-McNess Co., Freeport, Ill., insecticides, disinfectants and cattle sprays, has recently given up this position.

Robley D. Stevens has been made Philadelphia representative for John T. Stanley Co., New York, and has discontinued all other agency connections.

Sanitary Chemical Co., 1325 North 36th Street, Seattle, Wash., has recently started operations.



OnIzed
CONTAINERS

Pointing the way to bigger sales

■ Have you a product or line of products the sale of which could be stepped up by improved packaging? If you feel that this is the case, we shall be glad to cooperate with you. OnIzed service covers every step of your packaging problem, including the design of inner and outer cartons, labels and closures, as well as the production of the right glass container for your product. Owens-Illinois Glass Company, Toledo, O.

Owens-Illinois

1873 - SIXTIETH ANNIVERSARY - 1933

Say you saw it in SOAP!

**More
U. S. Standard**

GUM ROSIN

is used in the soap industry than in any other.

BUY AT THE SOURCE

We have storage yards all over Dixie and can supply Rosin in wooden barrels or in metal drums.

Also

**Steam Distilled
PINE OIL**

**TAYLOR, LOWENSTEIN
& COMPANY**

MOBILE the seaport of ALABAMA
Agents Throughout the World

Death to Rats .. Mice .. Ants THALLIUM SULFATE kills !

Manufacturers of insecticides should investigate the possibilities of using this product in their preparations.

Exterminators will find Thallium Sulfate an especially efficient product when used on baits in accordance with our directions.

Thallium Sulfate is a white powder —100% tasteless and odorless. Other thallium salts are also available. Packed in 2½ pound bottles and cans and in 50 pound boxes. Get complete information about the merits of Thallium Sulfate now.

ORE & CHEMICAL CORP.
40 RECTOR ST. NEW YORK, N. Y.

Bowling Green 9—5523-24-25

Know What You Are Buying

As a buyer or consumer of liquid insecticides you must have some medium for ascertaining the efficiency of the products you purchase and sell.

Why guess or be in doubt? You have at your disposal a medium for purchasing insecticides on an intelligent basis.

Entomological testing by the Peet-Grady method, and chemical examination of insecticides are now available.

Charges are moderate, and our completely equipped and expertly directed laboratory is at your service.

**ENTOMOLOGICAL TESTING
LABORATORIES, INC.**

114 E. 32nd St. New York, N. Y.

New!

REPELOCIDE *for 1933 Sprays*

... a genuine repellent for use in
... household, cattle and other insecticidal sprays.

Repellent Value—Livestock Sprays

94% efficient *with* 10% REPELOCIDE
76% efficient *without* REPELOCIDE

Repellent Value—Household Sprays

69% efficient *with* 5% REPELOCIDE
45% efficient *without* REPELOCIDE

... will increase the kill of your Pyrethrum sprays 15 to 25% by the Peet-Grady method.

... will not stain in household sprays.

... pleasant odor, making other perfuming unnecessary unless desired.

... also for use in insect repellent creams, flea and chigger ointments.

Let us send you full detailed information.
Trial gallon \$2.50 F. O. B. St. Louis.

THOROCIDE COMPANY

619 Clark Avenue

St. Louis, Mo.

Say you saw it in SOAP!

Union Oil Company of California has recently put a new insect spray on the market under the name "Bif." It is sold as an all-purpose insecticide, the makers purposely refraining from calling it a "fly" spray. It retails at 50c a pint and 85c a quart. The container is by Anchor Cap & Closure Corp.

The Case of Coconut Oil

(From Page 57)

utter absurdity of this reasoning. At the same time is it not much sounder economics to sell our high grade edible fats at the higher prices they command as such in the European markets, and import the lower priced vegetable oils for use in the soap kettle, for which purpose they are far superior to any of our domestic fats?

It will be interesting to note that even before we had any appreciable imports of vegetable oils, we had the same large exportation of lard. However, since the application of the tariff to cottonseed oil, it is evident that its principal result has been not the elevation of the general price level of the oil but the elimination of America's once large export business of refined oil and with it the partial loss of the cake and meal export market. In support of this statement one need only refer to the exports of cottonseed oil to see the very noticeable declines beginning with the tariff enactment of 1921 and the practically complete elimination of exports with the final tariff enactment of 1930-31.

(To be Continued)

Hiring Salesmen

(From Page 97)

One of the problems we have encountered with the long established salesman with his regular patronage, is his tendency to stick to the line of least resistance, calling on his regular customers, getting their orders, if any, and jumping on to the next point. It is very difficult to get him to solicit minor new accounts, for the reason that he feels that the time spent in getting these small orders could be more profitably spent in landing bigger business. To overcome this loss in smaller accounts—and taken as a whole, they often prove "pot boilers"—we sometimes send out a Junior salesman to travel in company with our regular men, and while the Senior man is making his regular rounds, the Junior salesman is picking up the smaller business that the Senior salesman feels unworthy of his time and talents. While the Junior salesman may not produce in any real quantity, he makes new contacts for the house, which often result in nice repeat mail order business, and in fact, serves in a measure as a mail order builder.

Along this line, we also find that the salesman accustomed to soliciting wholesale accounts can seldom adapt himself to calling on the retail trade, and by the same token, the retail salesman is not able to land big business as effectively. Of course, there are exceptions where the salesman is flexible enough to get the most out of each situation, but as a general rule, each type fits into his own particular niche.

In closing, one thought I want to stress is the importance of keeping up the salesman's morale during times like the present. After all is said and done, we are all of us very largely dependent on what the salesman is able to bring in in the way of orders. It is evident that no one has yet discovered a common sales plan that will fit all types of business, nor can the same sales plan always be applied to all the individuals on any sales force.

With the shifting sands of business conditions constantly bringing forth new and changed conditions, we are ever called upon for further experimentation and groping for what may be the Perfect Plan.

PHOSPHORUS PASTE

Kills these Pests

**Water Bugs, Roaches
Rats and Mice**

Our Phosphorus Paste does not become hard readily and keeps indefinitely in sealed containers.

There is a perfect division of phosphorus and therefore no fire hazard is connected with its use.

Only the purest and most attractive ingredients are used in this product.

It is packed in fifty pound steel pails and suitable for resale in tubes and cans.

POISON GRAINS

Effective and economical exterminators of mice.

Poison Rye (colored green)

Poison Oats (colored blue)

Poison Wheat (colored red)

Poison Barley (colored purple)

Poison Canary (natural color)

Mixed Poison Grains (colored four seed mixture)

Packed in fifty and one hundred pound drums.

We manufacture bulk products for the trade only.

SENNEWALD DRUG COMPANY, Inc.

800 Hickory Street

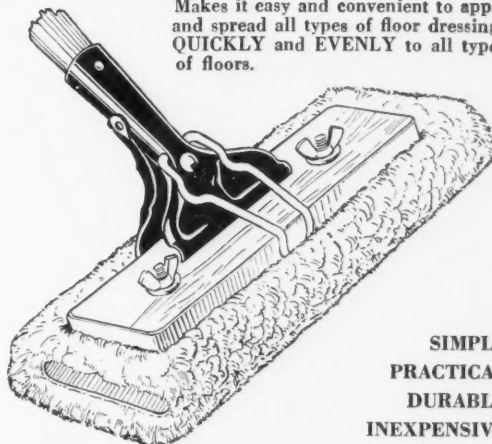
Saint Louis, Missouri

Established 1855

"HOLZ-EM"

Wax Applicator and Spreader

Makes it easy and convenient to apply and spread all types of floor dressings QUICKLY and EVENLY to all types of floors.



**SIMPLE
PRACTICAL
DURABLE
INEXPENSIVE**

The sheep wool pads are all first quality skins, specially tanned, with wool clipped to uniform length, insuring uniform application and spreading.

Sheep wool pads are washable and replaceable.

Made in three convenient sizes.

Packed one complete set with long handle in individual carton.

Recommended and sold by leading manufacturers and distributors of floor dressings throughout the country. Write for descriptive literature and prices.

American Standard Mfg. Co.

2509-13 LIME STREET

CHICAGO, ILLINOIS

Manufacturers also of:

HOLZ-EM HANDLES

KREBS RAINBOW MOPS

KREBS MASTERMOPS

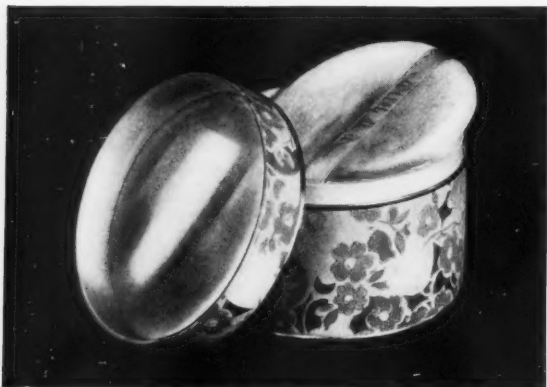
KREBS CAMELIZED SPONGES

the patented "leave-no-lint" mops made of BRAIDED YARN

Write for details

Say you saw it in SOAP!

There's Sales Appeal in the Tubular Package



A powder drum from Cleveland Tubes

A Tubular shape "does something" to a package that's hard to explain but certainly adds to its interest, draws you to it. And then, too, there's the item of economy. Our job is to help develop new, individual tubular packages, to achieve new economies, new sales appeal for our customers. Why not get in touch with us, now?

The Cleveland Container Company

Terminal Building E.
Plants: Cleveland, Detroit,
Hoboken, Philadelphia

Hoboken, N. J.
Sales Offices: Pittsburgh,
Rochester, Chicago

for your paste products — A REMOVABLE HEAD DRUM



A Trageser removable head drum is the ideal container for any of your bulk paste products—auto soaps, soft soap bases, polishes, textile specialties, fats, greases, etc. The head comes off quickly and makes the container easy to handle.

Trageser drums are built to last. Send for new low prices on 30, 55 and 110 gallon sizes.

JOHN TRAGESER STEAM COPPER WORKS
Grand Avenue. Maspeth, L. I., N. Y.

PULaski 5-7700

Now—THE NEW SMALL No. 10

VIBROX

PACKER



Furnished Complete with 1/6 H.P.
Motor and "V" Belt Drive

**FOR PACKING, "RAPIDLY AND THOROUGHLY,"
CANS, CARTONS, BOXES AND BAGS
WEIGHING FROM 5 UP TO 12 POUNDS**

The new No. 10 VI BROX was designed and built to meet a definite demand for a packer to pack small bags, boxes, and other containers, weighing up to 12 pounds.

VI BROX Packers are rapid, require a small amount of power, and in many cases make possible the use of smaller containers.

Let us show you the possibilities of a complete weighing and packing unit, combining Edtbauer Duplex Net Weigher and VI BROX Packer, for your packages ranging up to 12 pounds.

Manufactured by

EST.
1872

B. F. GUMP CO.

INC.
1901

MIXING, SIFTING and PACKING EQUIPMENT

424-430 S. CLINTON ST.

CHICAGO

PALMER APPLICATORS

For All Types of Floor Treatments



The 2 A applicator here illustrated is indeed an ingenious device. Metal parts provide a frame into which are clamped white felts that are riveted together by screwing in the handle. Removing handle releases felts for replacement or cleaning. Refill felts necessary only when old felts are entirely worn out. Width of felts—14". We also manufacture lamb's wool applicators.

The No. ZP pan, 16" long and 6" square is ideal to use with the 2 A applicator.

Use Palmer "MYSTIC GLOSS" For All Floors

Easily and quickly applied. Dries within 20 minutes, leaving bright lustrous, wear-resisting film. Moisture-proof—prove this to your own satisfaction by comparing Mystic Gloss with any other product. Test quantity furnished upon request.

Palmer
PRODUCTS INC.
WAUKESHA, WIS.
Adjacent to Milwaukee

We manufacture a complete line of janitor and sanitary supplies, including soap dispensing equipment of all kinds. Write for complete literature.

Say you saw it in SOAP!

CLASSIFIED ADVERTISING

Classified Advertising—All classified advertisements will be charged for at the rate of ten cents per word, \$2.00 minimum, except those of individuals seeking employment where the rate is five cents per word, \$1.00 minimum. Address all replies to Classified Advertisements with Box Number, care of *Soap*, 136 Liberty St., New York.

Note: All advertisements must be in publisher's hands by the first of the month for that month's issue.

Positions Wanted

Salesman: Located Metropolitan New York, would like to hear from manufacturers wanting personal sales representation here. References furnished. Address Box 138, care *Soap*.

Superintendent—Soap Maker, practical man with long experience at the soap business, seeks new connection. Good references and hard worker. Address Box 139, care *Soap*.

Soap Maker and Chemist, with long years' experience over here and abroad—reliable in every respect and familiar with the manufacture of all kinds of soaps from A to Z. Best references. Address Box 140, care *Soap*.

Soap Plant Manager—Man with many years' experience in complete charge of soap business, manufacture, sale, purchasing, seeks new position. Box 151, care *Soap*.

Position Wanted: Young chemist five years ago discovered and has since perfected and pioneered sales development of a new type successful detergent from phenol. A new outlet with nation-wide demand quickly growing requires greater distribution and advertising facilities. Can show ample proof. Have U. S. Patent pending. Can bring bulk business that is on the way up. Request proposition from high grade manufacturer. Steady position only. Address Box 152, care *Soap*.

Chemist: Young man, five years' experience in chemicals, soaps and fatty oils. Knows line from A to Z. Address Box 142, care *Soap*.

Supt. Soap Maker, Perfumer: Laundry, toilet soaps, preparations. Long experience on profitable goods. Hablo castellano. Remodel factories. Address Box 143, care *Soap*.

Expert exterminator, fumigator, and able salesman desires position with domestic or for-

We Manufacture For The Trade ONLY

Liquid Soap Base
Auto Soaps
Potash Oil Soap
Shampoo
U.S.P. Cresol Compound
Coal Tar Disinfectants
Liquid Soap
Pine Oil Soap
U.S.P. Green Soap
Shampoo Base
Pine Oil Disinfectants
Insecticides

Ask for samples of these specialty bulk products

HARLEY SOAP CO.

2852 E. Pacific St.

Philadelphia

REBUILT SOAP MACHINERY

2—16x40 Water Cooled Roller Mills.
Proctor Dryer and 5-Roll Chilling Unit.
36—1200 lb. Frames.
1—Scott Glycerine Evaporator.
2—Foot Para Block and Soap Presses.
1—Houchin Amalgamator.
3—Dopp and Houchin Vertical Crutchers.
1—1500-lb. Horizontal Crutcher.
2—3 Roll Granite Stone Mills.
1—Simplex Soap Powder Grinder.
1—Quaker City M-20 Soap Powder Grinder.
Cutting Tables, Slabbers, Kettles, Pumps,
Tanks, Filter Presses, Wrapping Machines,
Tube Fillers, Closers, Crimpers, Dry Powder
Mixers, etc.

Send for Complete List (Bulletin No. 10)

We buy and sell from single items
to complete plants.

Stein-Brill Corporation

25 Church Street

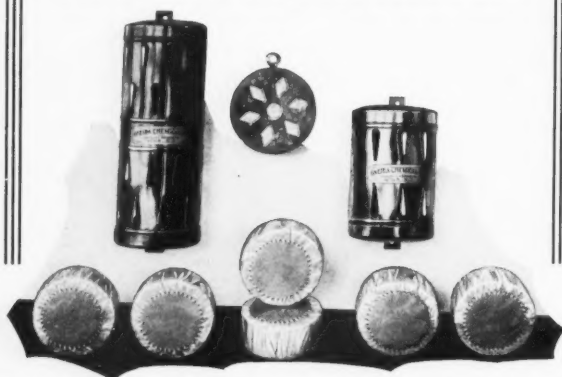
New York, N. Y.

Phone:
BARElay 7—4851

Cable Address:
"BRISTEN"

Say you saw it in SOAP!

Durable and Distinctive DEODORANT HOLDERS



Why continue to supply your customers with unattractive, tin holders for deodorizing blocks and cakes when you can buy an excellent Oneida holder at low cost? These holders are strongly constructed and are attractively finished in oxidized copper. They may be used with cakes or blocks. Send for a sample and let us quote on your requirements, available with or without your own name plate.

We also offer attractively wrapped cakes in bulk to jobbers. Our prices are competitive.

ONEIDA CHEMICAL CO.
760 BLANDINA ST., UTICA, N. Y.

REQUIRE MECHANICAL HELP?



The two practical machines shown here comprise all you need to produce very satisfactory *Paradichlorobenzene Disinfecting Blocks*, or *Moth Repellent Tablets*.

The small machine illustrated is a mixer which will blend colors, perfumes, binders or cheapening ingredients to any batch with the greatest of satisfaction,

and the large machine will compress the mixture into blocks and tablets of any shape or form that dies can give.

The mixer is equally usable on dry powders such as roach, pyrethrum or other blending operations. Likewise for shaving, face and other creams, for smoothing, softening and giving that "velvety texture."

The hand lever press has more power than cheap foot lever presses and will produce fine looking blocks very rapidly by any kind of labor, male or female.

Samples, made from your materials, will gladly be submitted. Guaranteed saving of 5% to 10% over hot process.



HUBER MACHINE CO.

259 — 46th St.

Brooklyn, N. Y.

Makers of good soap machinery for forty years.

BARNSDALL PRODUCTS

Make Superior
Soaps and Cleansers

BENTONITE

Superior Wyoming

TRIPOLI

Seneca Standard

VOLCANIC ASH

90% minus 200 mesh

Our Reputation is Your Guarantee

BARNSDALL TRIPOLI COMPANY

Subsidiary of Barnsdall Corporation

SENECA, MISSOURI

Vioflor

A CHEMICALLY SOUND, PERMANENT DEODORIZER

THIS product is a great help to manufacturers of insecticides, naphthas, waxes, polishes, and Paradichlorobenzene blocks.

It saves you 40% to 70% of your perfuming cost *without changing the odor effect you now have in your product.*

It takes only a few minutes to demonstrate this.

On every thousand dollars you now pay out for, perfuming ingredients why not save \$400.00 to \$700.00?

Manufactured by

CREPIN & DOUMIN, Ltd., London, England

Sold in the United States and Canada by

JOHN POWELL & CO., Inc.

114 East 32nd Street

::

New York, N. Y.

Say you saw it in SOAP!

eign concern. References given upon request. Experienced in exterminating field for nine years. Address Box 144, care *Soap*.

Coal-Tar Salesman—Man with extensive sales experience with three coal-tar disinfectant manufacturers, at present out of industry, desires connection in sales department. Communicate with Box 147, care *Soap*.

Salesman, 30, now employed; ten years selling laundry and toilet soaps, would like to be representative of local or out-of-town soap manufacturer in New York State. A-1 references. Address Box 135, care *Soap*.

Positions Open

Young Chemist—Opening in production department of large soap house for young man with some technical training, not necessarily a trained chemist. Experience in soap, cosmetic or drug house valuable. Position affords future advance. Address with full information Box 146, care *Soap*.

Salesmen Wanted in Various States as an allied line, to sell established line of waxes and polishes manufactured by one of the oldest wax concerns in America. Only producers need apply, commission basis; references required with application. Address Box 137, care *Soap*.

Miscellaneous

New Janitor Supply Jobber—Is interested in purchasing bulk disinfectants, moth fluid, insecticides, brooms, mops, etc. Also in press for moth cakes with dies. Also bulk liquid soap and soap powder. Address Weiner Soap & Chemical Co., 655 Sixth Ave., New York.

Equipment Wanted: Electric blowers about $\frac{1}{2}$ H.P. size and Nibroxx barrel and bag packers. Must be in good condition; state price. Address Box 136, care *Soap*.

Wanted: Exterminating business for cash, must be established. No brokers need apply as this is wanted by private party. Address Box 141, care *Soap*.

Manufacturer's Agent—Temporarily in the east, will handle line of soaps and janitor supplies in California for responsible manufacturer. Thoroughly familiar with Pacific Coast territory. Ample financed. Address Box 145, care *Soap*.

USED SOAP MACHINERY

Rebuilt - Guaranteed

SPECIALS

- 3—650 gal. Dopp Steam Jacketed Kettles.
- 1—Soap Chip Dryer, 1200 lb.
- 1—Houchin 1000 lb. Mixer, double shaft.
- 1—Dopp 1500 lb. Steam Jacketed Crutcher.

5—Houchin & Rutschman Plodders, 4", 6" double screw, 8", 10".

25—Soap Frames, 60"x45 $\frac{1}{2}$ "x14".

20—Filter Presses, 42"x42" to 12"x12".

18—Horizontal Mixers, 15 gal. to 1000 gals.

8—Granite 3 and 4-roll Mills—12", 18" and 24".

MISCELLANEOUS—Kettles, Mixers, Pony Mixers, Tube Fillers, Tanks, Labelers, Wrapping Machines, Boilers, Pumps, Power and Foot Presses, etc.

Send for latest Printed Bulletins

CONSOLIDATED PRODUCTS COMPANY, INC.

15-21 Park Row, N. Y. C. BArcley 7—0600

We buy your idle Machinery—separate items or entire plants.

TRISODIUM PHOSPHATE DISODIUM PHOSPHATE

Preferred for their colorless crystals, uniform size and sparkling appearance. Prompt deliveries made from convenient distributing points. Packed in 325-pound paper-lined barrels and paper-lined kegs. Also in bags.

BOWKER CHEMICAL COMPANY

419 Fourth Ave., New York

Say you saw it in SOAP!

Where to buy

RAW MATERIALS AND EQUIPMENT

for the Manufacture of Soaps and Sanitary Products

NOTE: This is a classified list of the companies which advertise regularly in *Soap*. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, etc., in which you are particularly interested. Refer to the Index to Advertisements, on the following pages, for page numbers. "Say you saw it in *SOAP*."

ALKALIES

American Cyanamid & Chemical Corp.
Columbia Alkali Co.
Niagara Alkali Co.
Solvay Sales Corp.
Stauffer Chemical Co.
Warner Chemical Co.
Welch, Holme & Clark Co.

E. I. du Pont de Nemours & Co.
General Chemical Co.
Grasselli Chemical Co.
Mechling Bros. Chemical Co.
Monsanto Chemical Works
Newport Chemical Works
Niagara Alkali Co.
Philadelphia Quartz Co.
Solvay Sales Corp.
Standard Silicate Co.
Stauffer Chemical Co.
Swann Chemical Co.
Joseph Turner & Co.
Victor Chemical Works
Warner Chemical Co.
Welch, Holme & Clark Co.

AROMATIC CHEMICALS

Antoine Chiris Co.
Dodge & Olcott Co.
P. R. Dreyer, Inc.
E. I. du Pont de Nemours & Co.
Felton Chemical Co.
Fritzsche Brothers, Inc.
Givaudan-Delawanna, Inc.
Magnus, Maybee & Reynard, Inc.
Monsanto Chemical Works
Newport Chemical Works
Polaks Frutal Works
Sherka Chemical Co.
Solvay Sales Corp.
A. M. Todd Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.
Albert Verley, Inc.

COAL TAR RAW MATERIALS

(Cresylic Acid, Tar Acid oil, etc.)
American Cyanamid & Chemical Corp.
Baird & McGuire, Inc.
Barrett Co.
Koppers Products Co.
Monsanto Chemical Works
Reilly Chemical Co.
White Tar Co.

BULK AND PRIVATE BRAND PRODUCTS

Baird & McGuire, Inc.
Chemical Supply Co.
Clifton Chemical Co.
Davies-Young Soap Co.
Eagle Soap Corp.
Fuld Bros.
Harley Soap Co.
Hull Co.
Koppers Products Co.
Kranich Soap Co.
Oneida Chemical Co.
Palmer Co.
Philadelphia Quartz Co.
John Powell & Co.
Geo. A. Schmidt & Co.
Sennewald Drug Co.
Stevens Soap Corp.
U. S. Sanitary Specialties Corp.
White Tar Co.
Windsor Wax Co.

CONTAINERS

Cin-Made Corp. (Fibre Cans)
Cleveland Container Co. (Fibre Cans)
Continental Can Co. (Tin Cans)
Maryland Glass Corp. (Bottles)
Metal Package Corp. (Tin Cans)
Sefton National Fibre Can Co. (Fibre Cans)

DEODORIZING BLOCK HOLDERS

Clifton Chemical Co.
Eagle Soap Corp.
Fuld Bros.
Oneida Chemical Co.
Palmer Co.
U. S. Sanitary Specialties Corp.
William Vogel & Bro.

ESSENTIAL OILS

Antoine Chiris Co.
Dodge & Olcott Co.
P. R. Dreyer, Inc.
Fritzsche Brothers, Inc.
Leghorn Trading Co.
Magnus, Maybee & Reynard, Inc.
Polaks Frutal Works
A. M. Todd Co.
Ungerer & Co.
Van Ameringen-Haebler, Inc.
Albert Verley, Inc.

CHEMICALS

American Cyanamid & Chemical Corp.
Bowker Chemical Co.
Columbia Alkali Co.

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Consulting Chemists and Engineers

*Specializing in Soaps, Disinfectants,
Insecticides, Polishes, Etc.*

FOSTER D. SNELL, INC.

Chemists-Engineers

A technical organization offering complete consulting, research, operating and management service.

130 Clinton Street Brooklyn, New York

Expert Color Service—Free!

To manufacturers of soap, toilet preparations, pharmaceutical products, disinfectants, motor fuels, insecticides, sweeping compounds, cleansers, polishes and similar products. We offer, free, our services to help you secure the proper coloring for your finished product.

Eaton-Clark Co., 1482 Franklin St., Detroit

Specialists in Dyestuffs and Chemicals Since 1838.

CONSULTING CHEMISTS AND ENGINEERS

offering their services to manufacturers of soaps, disinfectants, household insecticides, polishes, cleansers, etc., should keep themselves before the entire industry regularly through the use of space in this department of SOAP.

Skinner & Sherman, Inc.

246 Stuart Street, Boston, Mass.

Bacteriologists and Chemists

Disinfectants tested for germicidal value or phenol coefficient by any of the recognized methods.

Research—Analyses—Tests

LLOYD A. HALL

Research and Consulting Chemist

Specialist in the analysis, development and improvement of soaps, disinfectants and allied products since 1915.

Complete Research and Consulting Service

Laboratories, 1415 W. 37th St., CHICAGO, ILL.

FRANK R. GUNN COMPANY

Analytical and Consulting Chemists

Ontario and Brabant Sts. Philadelphia, Pa.

We Manufacture

Cleaning and Scrubbing BULK SOAPS

For the Jobber Exclusively!

Packed in any size required.

Drums— 55, 30, 15 gallons

Cans— 10, 5, 1 "

Barrels— 470, 260 pounds

Kegs—125, 100, 50 "

Tubs— 60, 50 "

Liquid Toilet Base Soap

Coco Oil—60%—Natural, Opal, Green

Liquid Toilet Soaps—10, 15, 20%

Coco Oil, All Colors, Perfumed.

Concentrated Scrubbing Soap

Pine, Sassafras, Odorless

Soft Potash Vegetable Oil Soap

Light and Dark Amber, Soft Jelly.

1932 Prices Now in Effect

KRANICH SOAP CO., Inc.

54 Richards Street

BROOKLYN, N. Y.

F. & S.

Quality Colors
for

TOILET SOAPS
LIQUID SOAPS

TOILET PREPARATIONS

Long experience enables us to produce colors for all types of soaps.

If you have a shade you want matched send us a sample. We have complete facilities for matching.

Liquid soap colors a specialty—send for samples of F. & S. greens and ambers.

FEZANDIE & SPERRLE, Inc.

205 FULTON STREET

NEW YORK, N. Y.

Import—Manufacture—Export

Say you saw it in SOAP!

RAW MATERIAL and EQUIPMENT GUIDE

(Continued from page 112)

NOTE: This is a classified list of the companies which advertise regularly in *Soap*. It will aid you in locating advertisements of raw materials, bulk and private brand products, equipment, etc., in which you are particularly interested. Refer to the Index to Advertisements, on the following pages, for page numbers. "Say you saw it in *SOAP*."

MACHINERY

Alsop Engineering Co. (Liquid mixing, filling and storage)
 Anthony J. Fries (Soap Dies)
 B. F. Gump Co. (Barrel Packers, Packing, Weighing, Mixing and Conveying Equipment)
 Houchin Machinery Co. (Soap Machinery)
 Huber Machine Co. (Soap Machinery)
 R. A. Jones & Co. (Automatic Presses and Cartoners)
 Mixing Equipment Co. (Portable Mixers)
 Proctor & Schwartz (Dryers)
 Sowers Mfg. Co. (Crutchers)

MACHINERY, USED

Consolidated Products Co.
 Newman Tallow & Soap Machinery Co.
 Stein-Brill Co.

METAL CAPS

Anchor Cap & Closure Corp.
 Crown Cork & Seal Co.
 Ferdinand Gutmann & Co.

MISCELLANEOUS MATERIALS

Barnsdall Tripoli Co. (Abrasives and Fillers)
 Derris Inc. (Derris Products)
 General Naval Stores Co. (Pine Oil-Rosin)
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 Ore & Chemical Corp. (Thallium Sulfate) Thallium
 Pylam Products Co. (Lathering Agent)
 Rohm & Haas Co. (Insecticide Base)
 Sennewald Drug Co. (Poison Baits)
 Taylor Lowenstein & Co. (Rosin-Pine Oil)
 Thoricide Co. (Insecticide Base)

OILS AND FATS

Leghorn Trading Co.
 Newman Tallow & Soap Machinery Co.
 Theobald Annual By-Products Refinery
 Welch, Holme & Clark Co.

PARADICHLORBENZENE

E. I. du Pont de Nemours & Co.
 Monsanto Chemical Works
 Niagara Alkali Co.
 Solvay Sales Corp.

PERFUMING COMPOUNDS

Antoine Chiris Co.
 Dodge & Olcott Co.
 P. R. Dreyer, Inc.
 Felton Chemical Corp.
 Fritzsche Brothers, Inc.
 Givaudan-Delawanna, Inc.
 Magnus, Maybee & Reynard, Inc.
 Polaks Frutal Works
 Ungerer & Co.
 Van Ameringen-Haebler, Inc.
 Albert Verley, Inc.

PYRETHRUM PRODUCTS

(Insect Flowers, Powder and Pyr. Ext.)

J. L. Hopkins & Co.
 McCormick & Co.
 McLaughlin, Gormley, King Co.
 S. B. Penick & Co.
 John Powell & Co.

SANITARY ACCESSORIES

American Standard Mfg. Co. (Mops, Sponges)

SOAP COLORS

Eaton-Clark Co.
 Fezandie & Sperrle
 Pylam Products Co.

SOAP DISPENSERS

Auto-Sun Products Co.
 Clifton Chemical Co.
 Eagle Soap Corp.
 Fuld Bros.
 Palmer Co.
 U. S. Sanitary Specialties Co.

SODIUM SILICATE

American Cyanamid & Chemical Corp.
 General Chemical Co.
 Grasselli Chemical Co.
 Mechling Bros. Chemical Co.
 Philadelphia Quartz Co.
 Standard Silicate Co.

SPRAYERS

Breuer Electric Mfg. Co.
 Dobbins Mfg. Co.
 Hudson Mfg. Co.
 Lowell Sprayer Co.
 Metal Specialties Mfg. Co.
 Potato Implement Co.
 Sprayit

STEEL CONTAINERS

John Trageser Steam Copper Works (Pails and Drums)
 Wilson & Bennett Mfg. Co. (Pails and Drums)

SULFONATED OILS

National Oil Products Co.
 Richards Chemical Works

TRI SODIUM PHOSPHATE

American Cyanamid & Chemical Corp.
 Bowker Chemical Co.
 General Chemical Co.
 Grasselli Chemical Co.
 Swann Chemical Co.
 Victor Chemical Works
 Warner Chemical Co.

MECHLINGEST. **BC** 1869

PHILADELPHIA
CAMDEN, N. J.
BOSTON, MASS.

**ILLUSTRATE
TODAY****MECHLING BROS. CHEMICAL COMPANY****"FILMA-SEAL"**

(the double seal of cap and film)

*Is used on many nationally known products***Prevents****Evaporation—Leakage—Tampering**

Send us a few of your packages, glass or tin, to
"FILMA-SEAL" and we will prove its advantages to you.

FERDINAND GUTMANN & CO.

Bush Terminal No. 19

Trade Marks Reg.

Brooklyn, N. Y.

Pats. Pending

**SOAP
POWDER**

FLUFFY AND HEAVY

Scouring Powder
and
Detergent

*Packed in barrels or kegs.**In bulk to the trade.***STEVENS SOAP CORP.**

200 Sullivan St., Brooklyn, N. Y.

CUMBERLAND 6—3747

FLOOR WAX**LIQUID
PASTE
POWDER****New Improved Self-Polishing Liquid Wax****UNDER YOUR OWN LABEL**

We print the label

*Send for Samples and Quotations***WINDSOR WAX COMPANY**

50 Church Street

REctor 2—0661
Factory: 611-617 Newark St., Hoboken, N. J.

New York, N. Y.

Say you saw it in SOAP!

SHAVING CREAM

TOOTH PASTE

*In
Bulk
Or*

Under Your Own Name in our special tubes and cartons. These are lithographed with a blank space for *YOUR* label. In any quantity from one gross up.

GEO. A. SCHMIDT CO.

Manufacturers of  of Every Description

236-238 West North Avenue.
Chicago.

Cans..

Fibre Ends
Metal Ends

for Dry Products

Insecticide Cans
Moth Cake Cans
Powdered Soap Cans
Cleanser Cans
Deodorant Cans

THE finest fibre Can and Tube Service
in America

SEFTON

SEFTON NATIONAL FIBRE CAN CO.

3205 Big Bend Road
MAPLEWOOD, ST. LOUIS, MISSOURI
Plants in Chicago, New Iberia, La., and St. Louis

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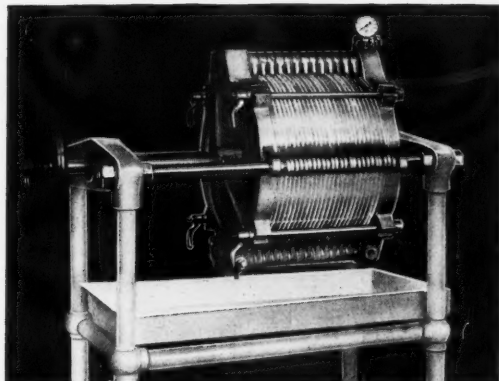
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Say you saw it in SOAP!

FILTRATION 1st Stage CLARIFICATION 2nd Stage



HOW MUCH can still be taken out of your filtered liquid you will never know until we have shown you by a free clarification test, without any obligation on your part.

KEEP your filter presses. You will need them more when we show you how to improve their product.

Follow this up. Ask us for details. We will instruct you how to submit a sample for our free test.

ALSOP ENGINEERING CORP.

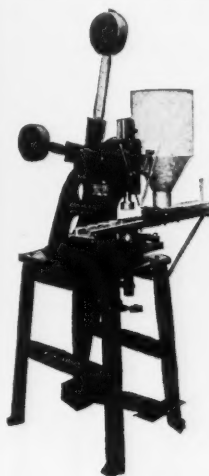
Electric Filters, Asbestos Discs, Pumps, Glass Lined Tanks and Mixers
39 West 60th Street New York, N. Y.

A classified
Advertisement
in SOAP—

**Will Produce
Results!**

TRY IT!

HOUCHIN



*Machine-Made
DEODORIZING
BLOCKS
Sell Best!*

Blocks made with this press, by the new cold pressed method, sell better and cost much less to make. Save 5% of your raw material, cut labor, and make a smooth, even, deodorizing block that will please your customers much more than the old style, irregular blocks. Complete cost details and manufacturing suggestions on request.

*Let us make some sample
cakes with your own material.*

HOUCHIN MACHINERY COMPANY
HAWTHORNE NEW JERSEY

SOAP MACHINERY

**Rust Preventive
Radiator Stop-Leak
Radiator Cleaner**

*... in capsules
individually
boxed or in bulk
... new low prices*

THE HULL COMPANY

130 CLINTON STREET
BROOKLYN, NEW YORK

Say you saw it in SOAP!

LIGHTNIN PORTABLE MIXERS

FAMOUS
for their earning power in
the process industries.

The large savings gained are **NET PROFITS** to your company

Thousands of plants are economizing daily by the modern LIGHTNIN method of mixing soap solutions, lotions, creams, perfumes, disinfectants, insecticides, chemicals and numerous other fluid products.

LIGHTNIN Mixers are built in **ALL SIZES** and various speeds. They clamp on any tank, kettle, barrel or vat, and give a thorough bottom to top turn-over mixing action. **RECOGNIZED** as the most efficient and time saving means of mixing fluid and semi-fluid products.



Patented

Write for information.

ECONOMIZE the LIGHTNIN Way.

MIXING EQUIPMENT CO., INC.

Originators and Largest Manufacturers of Portable Electric Mixers

1044 Carson Ave., Rochester, New York

New York, N. Y.

Chicago, Ill.

MAILING LISTS

Pave the way to more sales with actual names and addresses of Live prospects. Get them from the original compilers of basic list information—up to date—accurate—guaranteed.

Tell us about your business. We'll help you find the prospects. No obligation for consultation service.



60 page Reference Book and Mailing LIST CATALOG

Gives counts and prices on 8,000 lines of business. Shows you how to get special lists by territories and line of business. Auto lists of all kinds. Shows you how to use the mails to sell your products and services. Write today.

R. L. POLK & CO.

Polk Bldg.—Detroit, Mich.

Branches in Principal Cities

World's Largest City Directory Publishers

Mailing List Compilers. Business Statistics. Producers of Direct Mail Advertising.

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Say you saw it in SOAP!

AN IMPORTANT INDUSTRIAL PUBLICATION

The Manufacturing Chemist

Pharmaceutical, Cosmetic, and Photographic Trade Journal

THE MANUFACTURING CHEMIST deals exclusively and authoritatively with the production, manufacture and packing of drugs, pharmaceuticals, cosmetics, toilet preparations, photographic materials, soaps, fine chemicals, essential oils, perfumes, dental preparations, patent foods, and medicines in liquid, powder, paste, pill or tablets, polishes, antiseptics, germicides.

Read by those who make what the Retail Chemist sells

Subscription 10/- per annum post free home and abroad

Published at the same address:

FOOD MANUFACTURE.
PAINT MANUFACTURE.
RUBBER INFORMATION.
and THE CHEMICAL ENGINEERING
& CHEMICAL CATALOGUE.

LEONARD HILL LTD.,
231 STRAND W. C. 2
London England

ADVANCED SOAP-MAKING



*A Specimen Copy will be willingly
forwarded free on application.*

148, Fleet Street London, E. C. 4

Say you saw it in SOAP!

No Chemical Plant Is Complete Without a Compact Technical Library

And No Such Library Is Complete Without These Well-Known TECHNICAL BOOKS

Perfumes, Cosmetics and Soaps, by Poucher. New and revised edition of this standard reference. Volume I, a dictionary of raw materials, 394 pages, \$6.50. Volume II, dealing with the manufacture of soaps, perfumes and toilet preparations, 406 pages, \$7.50.

The American Soap Maker's Guide, by Meerbott and Stanislaus. The most recent American publication on soap manufacturing. 750 pages. \$7.50.

Textile Soaps and Oils, by Hurst & Simmons. A handbook on the preparation and properties of soaps and oils used in textile manufacturing. 212 pages. \$4.00.

Henley's Twentieth Century Book of Recipes, Formulas and Processes. A handy reference book listing 10,000 miscellaneous formulas, including special sections for soaps, polishes, insecticides, etc. 800 pages. \$4.00.

The Industrial Chemistry of Fats and Waxes, by Hilditch. A study of the fats and waxes in relation to their use in industry. 450 pages. \$6.00.

Manual of Toilet Soap Making, by Deite. Translation from a standard German text on manufacture of toilet and medicated soaps. 360 pages. \$8.00.

Art of Soapmaking, by Watt. Practical handbook on the manufacture of hard and soft soaps. 323 pages. \$4.00.

Modern Soap Perfumes, by Sedgwick. A practical handbook on the science of soap perfumery. \$1.00.

Hydrogenation of Organic Substances, by Ellis. Latest revised edition of this well-known book, pre-eminent in the field of hydrogenation. 990 pages. \$15.00.

Modern Soap and Detergent Industry, by Martin. Second Edition. An outstanding contribution to the literature on soap manufacture. Thoroughly up to date work covering processes, apparatus and formulas. In two volumes—cloth binding, 6½ x 10½. Price \$12.00 for each volume.

Chemical Encyclopaedia, by Kingzett. A digest of chemistry and chemical industry. 810 pages. \$10.00.

Soaps and Proteins, Their Colloid Chemistry in Theory and Practice, by Fischer. 272 pages. \$4.00.

The Examination of Hydrocarbon Oils, and of Saponifiable Fats and Waxes, by Holde. 572 pages. \$6.00.

Soaps, by Hurst. A practical manual of soap manufacture. 440 pages. \$8.50.

A Handbook of Soap Manufacture, by Simmons and Appleton. 167 pages. \$4.00.

Soap Blue Book, A Buyer's Guide. 195 pages. \$1.00.

Vegetable Fats and Oils, by George S. Jamieson. 444 pages. An American Chemical Society Monograph. Covering classification, occurrence, properties, analytical methods, etc., of vegetable oils, fatty acid and other derivatives; also production and refining methods. \$6.50.

Chemistry of Laundry Materials, by D. N. Jackman. A new book for the laundry operator, containing valuable information on the chemistry of laundry materials. Discusses alkalis, soaps, bleaches, starches, also the newer detergents, synthetic soaps, etc. 230 pages. \$2.50.

CHECKS MUST ACCOMPANY ALL ORDERS

NO BOOKS MAILED ON APPROVAL

MacNAIR-DORLAND CO.

136 LIBERTY STREET

NEW YORK CITY

Say you saw it in SOAP!

MOSKENE

STABLE TO LIGHT

A new artificial musk, especially good for soaps—more economical and tenacious than other artificial musks—a definite, true tonquin musk note. Moskene is exceptionally stable to light.

In odor, Moskene can be classified between Musk Ketone and Musk Ambrette; it is pleasanter than the latter, and has a more pronounced odor of Ambrette seed . . . a most desirable factor.

\$4.35 a pound in
25-pound lots

The name Moskene is copyrighted in all countries.

GIVAUDAN-DELAWANNA
INC.

80 Fifth Avenue, New York, N. Y.

SOMETHING TO DO A JOB . . .



and the PACKAGE says . . . YOUR Brand!

Consumers—with a job to do—will see, will ask about, and buy according to CONTAINER show of merit. Liquids possess no other first standard of comparison.

Smart CONTAINER styling, decora-

tion and convenience, points new products into swift trade currents. Re-styling quickens sluggish sales.

DISPLAY VALUE is the EMPECO aim of Packaging—thereby to build product reputation.

● CONTAINERS—Sized to suit—
Color-lithographed or Plain.

METAL PACKAGE CORPORATION

110 E. 42ND ST., NEW YORK CITY
ESTABLISHED 1909

SALES OFFICES AND PLANTS • NEW YORK CITY • BALTIMORE • BROOKLYN • CHICAGO
THE FISCHER CAN COMPANY DIVISION • HAMILTON • OHIO

